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THE

WEEKLY WEATHER REPORT

OF THE

METEOROLOGICAL OFFICE

FOR THE YEAR

1888

(VOL. V.—SECOND SERIES)

CONTAINING

SYNOPTIC CHARTS,

AND

DESCRIPTIVE SUMMARIES OF THE WEATHER FOR EACH DAY;

ALSO

TABULAR SUMMARIES OF TEMPERATURE, RAINFALL, AND BRIGHT SUNSHINE, FOR EACH WEEK.

WITH FOUR APPENDICES.

Published by the Authority of the Meteorological Council.

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1888.
Price One Shilling.

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PREFACE.

In the Weekly Weather Report for 1888 there have been no additions to the Tables or Charts, but the "Reports received too late for insertion in their proper places" have been given on the third page of each weekly issue, so that the table on p. v. of this Preface gives the missing reports for the last week only.

The general arrangement of the Report is as follows:—

LIST OF DISTRICTS.

For the purposes of this Report the United Kingdom is divided into eleven Districts, which are shown on the accompanying map, distinguished by the numbers 0 to 10. The positions of the stations supplying information are marked on the map by black dots, and their names are given in the following list, arranged under the districts to which they belong:—

METEOROLOGICAL DISTRICTS.

0. SCOTLAND, N.—Sumburgh Head, Stornoway, Wick, Lairg, Glen Carron, Fort Augustus.
1. SCOTLAND, E.—Nairn, Aberdeen, Braemar, Ochtertyre, Leith, Marchmont.
2. ENGLAND, N.E.—Alnwick Castle, Durham, Shields, Scarborough, York, Spurn Head.
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted, Ingatestone.
4. MIDLAND COUNTIES.—Bawtry, Loughborough, Leicester*, Cheadle, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Strathfield Turgiss, Dungeness, Hastings (St. Leonard's), Southampton, Hurst Castle, Stowell.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Glenlee, Douglas (Isle of Man).
7. ENGLAND, N.W.—Newton Reigny (Penrith), Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Llandovery, Pembroke, Arlington (N. Devon), Cullompton, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Malin Head, Londonderry, Mullaghmore, Belmullet, Markree Castle, Brookeborough, Armagh, Donaghadee, Edgeworthstown.
10. IRELAND, S.—Dublin, Parsonstown, Kilkenny, Waterford, Roche's Point, Valencia, Killarney, Foynes.

Besides these stations there are two in the Channel Islands, viz., Scilly (St. Mary's), and Jersey (Noirmont), which cannot be conveniently placed in any of the Districts.

TEMPERATURE.

The Summary on the first page of each Report gives for each week and District the absolute *maximum* and *minimum*, the averages of both the daily extremes, the daily mean, and its difference from the average of the corresponding period, as derived from observations of the 20 years, 1861–80 together with the values for "Accumulated" temperature above and below 42° F.

Daily Mean Temperature.

The daily mean Temperature shown in the Tables is calculated from the mean between the daily maxima and minima, due regard being had for the varying relation found to subsist, from month to month, between the true mean temperature of the day derived from 24 hourly observations, and the means of the daily maxima and minima for a series of years, as recorded at Greenwich and at the self-registering Observatories of the Meteorological Council.

The approximate Mean Daily Temperature for any week is found by multiplying the *difference* between the means of the seven observed maxima and minima by the proper coefficient for the month, as shown in the following Table, and adding the product to the observed minimum:—

Months.	Coefficient.
January. December.	0·520
February. November.	0·500
March. October.	0·485
April. September.	0·476
May. August.	0·470
June. July.	0·465

Example:

The mean maximum temperature for a week in December being	48°·1
The mean minimum	39·3
The difference is	8·8

This difference 8·8 × ·520 (the coefficient for December) = 4·6.

This product when added to the mean minimum, 39·3, gives 43°·9, the required mean daily temperature of the week.

Accumulated Temperature.

The Tables of Accumulated Temperature are designed to give persons engaged in agriculture better means of estimating the manner in which vegetation is affected by temperature than that afforded by the more usual methods of treating the readings of the thermometer. They show for each week, and for the whole period from the commencement of the year, the weekly and progressive values, respectively, of the combined amount and duration of the excess or defect of the air temperature, above or below a suitably fixed standard, or *base temperature*. The base adopted is 42° F., as being nearly equivalent to 6° C. This has been considered by Continental writers on these subjects to be the critical value, the temperature above which is mainly effectual in starting and maintaining growth, and in completing the ripening, of agricultural crops in a European climate. This base is also convenient as being 10° F. above the freezing point on the Fahrenheit scale.

* Leicester has ceased reporting since about the middle of the year.

A 57055. 350.—1/89. Wt. 37.

The Accumulated Temperature is expressed in Day-degrees; a Day-degree signifying 1° F. of excess or defect of temperature, above or below 42° F., continued for 24 hours; or any other number of degrees for an inversely proportional number of hours.

When the temperature during any period remains either wholly above or below the base temperature, the difference between the base and the mean temperature gives the correct accumulated temperature. In other cases this difference gives an approximate value for the accumulated temperature, which does not depart greatly from the truth, the deviation depending on the greater or less extent of the variations of the temperature above or below the base. Further, since the mean between the maximum and minimum of any day is nearly equal to the mean temperature of the day, the difference of the mean of the maximum and minimum from the base will also give, directly, an approximation to the accumulated temperature for the day.

The following rules, however, supply a still closer approximation to the true values sought, and they have been adopted for the preparation of the Tables in the Report. They may be applied to any other base temperature as well as o 42° F., with the slight modification of the numerical coefficients mentioned below.

RULES for computing, for a WEEKLY PERIOD, from the observed MAXIMA and MINIMA, the ACCUMULATED TEMPERATURE above or below 42° F.

1. Obtain the mean temperature, from the means of the seven observed maxima and minima, in the manner already described for daily values.

2. In obtaining the accumulated temperature four cases may occur, to which the following rules will apply:—

Conditions of Temperature.	To obtain the daily Accumulated Temperature.	
	Above 42° F.	Below 42° F.
If the minimum is *above* 42° F. or *equal* to 42° F. -	Subtract 42° F. from the mean.	There is none.
If the minimum is *below* 42° F., but the mean for the day is *above* 42° F.	From the difference between the mean for the day and the minimum deduct the accumulated temperature below 42° F., calculated as stated in the next column.	The required quantity is the excess of 42° F. over the minimum, multiplied by the coefficient 0·4.
If the mean for the day is *below* 42° F., but the maximum is *above* 42° F.	The required quantity is the excess of the maximum over 42° F., multiplied by the co-efficient 0·4.	From the difference between the mean for the day and the minimum deduct the accumulated temperature above 42° F., calculated as stated in the preceding column.
If the maximum is *below* 42° F., or *equal* to 42° F. -	There is none.	Subtract the mean from 42° F.

In each of the above cases the result will be the average daily value, and must be multiplied by 7 in order to obtain the value for the whole week.

The coefficient varies with the duration of the period, and also with the base temperature.

The coefficient given above, in Rules 2 and 3, is for a weekly period, and for the base temperature 42° F. The following are its values for other base temperatures, viz., for 32° F., 0·4; for 52° F., 0·33; for 62° F., 0·25.

A full explanation of the principles on which these rules are based will be found in Appendix II. to the Quarterly Weather Report for 1878.

RAINFALL.

The Summary gives for each week and each District the number of rainy days, and the total fall of rain, as well as the progressive values reckoned from the commencement of the year, and the difference between these amounts and the means for the corresponding week in the 20 years 1866–85.

BRIGHT SUNSHINE.

The Summary gives for each week and each District the numbers of hours of sunshine recorded, and the per-centage of that time to the whole time during which the sun is above the horizon; also the progressive values reckoned from the commencement of the year, together with the difference between them and the mean for the corresponding period in the five years 1881 to 1885.

APPENDICES.

Appendix I.—This contains (1) Summaries for each Quarter and for the whole year, of the Temperature and Rainfall records for each District, and (2) Tables giving for each district the monthly values for Rainfall, Accumulated Temperature (above and below 42° F.), and Bright Sunshine, as well as the progressive values for each from the commencement of the year, in continuation of the values given in Appendix I. for 1887.

Appendix II. gives for year 1888, and for each District, the weekly and progressive values for Rainy days, Amount of Rainfall, Accumulated Temperature (above and below 42° F.), and Bright Sunshine, in continuation of the values for the years 1878–87 printed in Appendix II. for 1887.

Appendix III. gives for each District, during the eleven years 1878–87, the mean aggregate values from the beginning of the year to the end of each week in the year for the following elements: Days of Rain, Amount of Rainfall, and Accumulated Heat (above and below 42° F.); also for the eight years 1881–88 the corresponding values for Bright Sunshine (both the Number of Hours recorded, and the per-centages of possible duration). These are in continuation of the values published in Appendix III. for 1887.

Appendix IV. gives for each District—for the eleven years 1878–87—the Mean Temperature of the Air for each Week in the year. This Appendix is in continuation of the values given in Appendix IV. for 1887.

Tables showing for each degree of Latitude from 49° N. to 58° N., and for each Weekly and Monthly period, the total number of hours during which the Sun is above the Horizon, together with their Reciprocals, are given in the Preface to Vol. I. of this Series.

TABLE SHOWING THE REPORTS RECEIVED TOO LATE FOR INSERTION IN THEIR PROPER PLACES.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.)								Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day Degrees). Above 42° F.	Below 42° F.	Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Number of Hours recorded.	Percentage of possible duration.
Week ending—		°	°	°	°	°	°				Inches.	Inches.		
December 17th, 1888	York	—	—	—	—	—	—	—	—	—	—	—	11	21
„ 24th „	York	—	—	—	—	—	—	—	—	—	—	—	0	0
„ „ „	Newton Reigny	49	23	47·0	35·5	41·5	+ 4·0	14	28	6	1·31	+0·51	9	16
„ „ „	Edgeworthstown	52	31	46·7	36·4	41·8	+ 1·9	13	25	6	0·88	+0·18	*	*
„ „ „	Llandudno	56	30	50·9	39·8	45·6	+ 3·4	34	6	5	0·34	−0·39	5	10
„ 31st „	Blackpool	48	28	42·6	32·2	37·6	− 3·1	2	26	4	0·83	+0·10	14	27
„ „ „	Llandudno	50	30	46·3	35·7	41·2	− 0·9	12	26	5	0·63	−0·08	12	23

The values for the earlier weeks have already appeared on the third page of the different weekly reports.

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WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 1.] *Second Series.* WEEK ENDING MONDAY, 9TH JANUARY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 4.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	54	30	48·6	39·2	44·1	6 above.	26	+21	8	−27	26	+21	8	−25
	1. SCOTLAND, EAST	57	26	49·4	38·2	44·0	8 above.	30	+24	11	−33	30	+26	11	−30
	2. ENGLAND, N.E.	63	31	47·6	37·4	42·7	5 above.	24	+17	13	−28	24	+17	13	−16
	3. ENGLAND, EAST	59	30	47·7	36·2	42·2	4 above.	26	+18	16	−29	26	+16	16	−14
	4. MIDLAND COUNTIES	59	29	48·5	36·9	42·9	5 above.	28	+18	14	−31	28	+16	14	−15
	5. ENGLAND, SOUTH	53	31	47·7	38·6	43·3	4 above.	23	+15	10	−26	23	+10	10	− 8
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	55	29	48·4	40·8	44·8	6 above.	25	+17	3	−32	25	+16	3	−24
	7. ENGLAND, N.W.	57	31	48·0	39·7	44·0	4 above.	24	+16	6	−29	24	+13	6	−17
	8. ENGLAND, S.W.	55	28	49·1	40·4	44·9	3 above.	27	+11	4	−18	27	+ 7	4	− 6
	9. IRELAND NORTH	59	26	50·9	39·9	45·6	5 above.	34	+23	6	−24	34	+19	6	−13
	10. IRELAND, SOUTH	59	27	51·8	41·4	46·8	5 above.	36	+17	2	−21	36	+13	2	− 9
	— CHANNEL ISLANDS	53	41	50·2	43·7	47·1	3 above.	36	+16	0	−12	36	+ 9	0	− 5

Rainfall.

Bright Sunshine.

	DISTRICTS. (See p. 4.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	6	9	0 (average).	6	+1	0·9	0·0	3	7	3	−2	7	− 5
	1. SCOTLAND, EAST	3	6	0 (average).	3	0	0·6	0·0	7	15	7	−4	15	− 9
	2. ENGLAND, N.E.	2	1	5 less.	2	−1	0·1	−0·5	9	17	9	+2	17	+ 4
	3. ENGLAND, EAST	3	1	4 less.	3	−1	0·1	−0·4	16	29	16	+6	29	+11
	4. MIDLAND COUNTIES	3	1	5 less.	3	−1	0·1	−0·5	11	21	11	+2	21	+ 4
	5. ENGLAND, SOUTH	3	2	4 less.	3	−1	0·2	−0·4	8	14	8	−2	14	− 3
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	6	22	2 less.	6	+2	2·2	+0·7	6	11	6	0	11	− 1
	7. ENGLAND, N.W.	5	4	4 less.	5	+1	0·4	−0·4	6	12	6	−2	12	− 2
	8. ENGLAND, S.W.	5	5	6 less.	5	0	0·5	−0·6	7	12	7	−5	12	−10
	9. IRELAND, NORTH	5	14	7 more.	5	0	1·4	+0·7	11	21	11	0	21	0
	10. IRELAND, SOUTH	4	21	12 more.	4	−1	2·1	+1·2	16	29	16	+2	29	+ 2
	— CHANNEL ISLANDS	7	5	3 less.	7	+2	0·5	−0·3	11	19	11	−3	19	− 6

General Remarks.

Weather was in an unsettled and rainy condition during the earlier part of the period, but subsequently became fine and unusually warm for the time of year generally, although in many parts of England thick local fogs were experienced. The rainfall which occurred over Ireland on the 3rd and 4th was very heavy.

Temperature has been above the mean in all districts, the excess ranging from 3° in "England, S.W." and the "Channel Islands" to 5° in Ireland and some parts of England, to 6° in "Scotland, N." and "Scotland, W.", and 8° in "Scotland, E." The absolute maxima, which were recorded either on the 8th or 9th, were in many places abnormally high for the the season. In Ireland and over eastern and central England the thermometer rose to 59°, and in "England, N.E." (at Durham) to 63°. In "England, S." and the "Channel Islands", however (where the weather was misty or foggy) the highest reading was 53°. The lowest of the minima were registered as the period commenced, when the temperature fell to between 26° and 31° generally, and to 41° in the "Channel Islands".

Rainfall has been more than the mean in Ireland and about equal to it in the north and east of Scotland, but in all other districts it has been less than the normal. At many of the English stations the fogs were sufficient to produce measurable amounts of water in the gauge.

Bright sunshine has been very little prevalent, the percentage of the possible amount of duration ranging from 7 to 15 in Scotland, and from 12 to 29 in Ireland and England.

Depressions observed.—During the greater part of this period a series of depressions moved in a north-easterly direction over our western and northern districts, the barometer being highest over the Continent. On the 3rd and 4th the gradients for Southerly to South-Westerly winds were steep over our Islands, and fresh to strong gales from those quarters were very general. Towards the end of the week the conditions over France and the south of England became anticyclonic and the depressions had disappeared from our neighbourhood.

A 52976. 350.—1/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

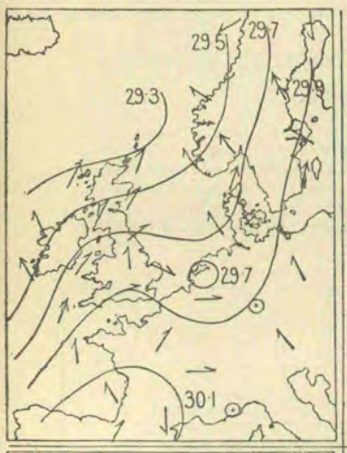
Weather

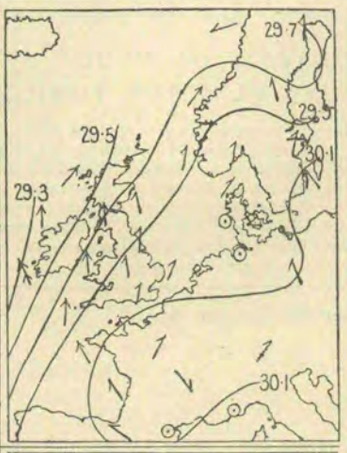
During the 24 hours succeeding 8 a.m. on the dates given.

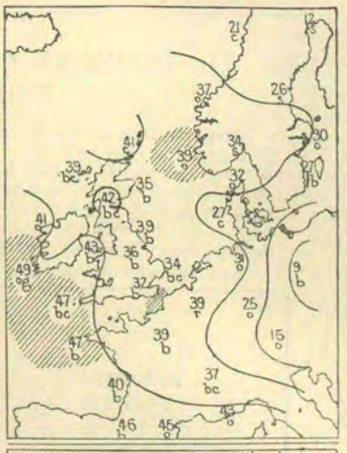
Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.







Tuesday, January 3.

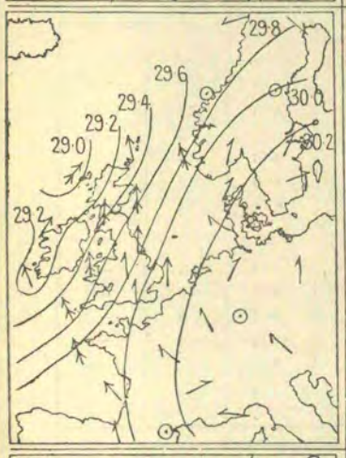
Weather fine in Great Britain and France, but dull elsewhere, with snow in the north of Sweden. Rain setting in later at most of our western stations.

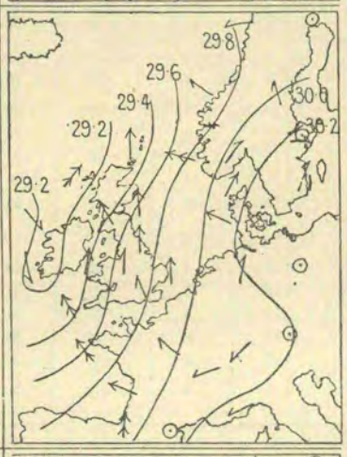
Temperature fallen a few degrees over our midland and south-eastern counties as well as in France, but risen elsewhere; readings over our Islands ranging at 8 a.m. from 49° at Valencia to 31° at Cambridge. Brisk rise taking place over England later.

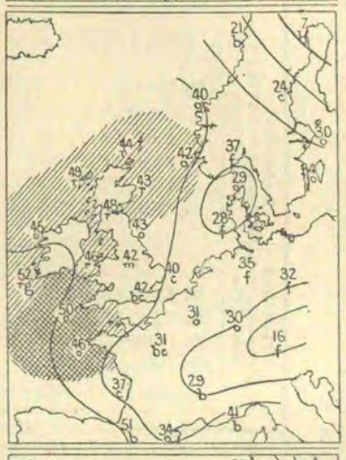
Wind moderate South-Westerly over Great Britain and the north of France, but Southerly or South-Easterly elsewhere; strong in force in Sweden and the south of Norway. Subsequently increasing to gale from South-East or South on our western and northern coasts.

Sea rough on our south-west coasts, but moderate to smooth elsewhere.

Barometer falling in the west of Ireland and also in Sweden, but rising elsewhere. Anticyclone lying over Spain and the south-west of France, with a depression off the north of Scotland, another approaching the west of Ireland, and a secondary disturbance over Holland. New depression in west subsequently passing northwards outside the Irish coasts.







Wednesday, January 4.

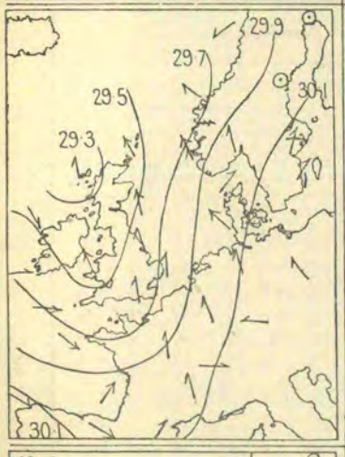
Weather fair in the north of Scandinavia, the south-east of England, and the greater part of France, but cloudy elsewhere, with rain at most of our western and northern stations. Rain extending to the south-east of England later.

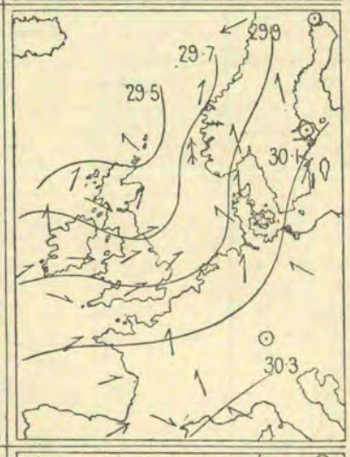
Temperature risen several degrees; readings over our Islands ranging at 8 a.m. from 52° at Leith and Valencia to 40° in the east of England.

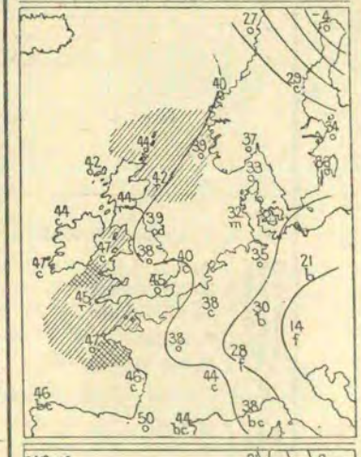
Wind South-Easterly or Southerly; strong to a gale in the west and north of our Islands. Subsequently shifting to the Northward in the west of Ireland, and falling light.

Sea high or rough on all our south-west, west, and north coasts.

Barometer falling at all but the Swedish, Danish, and German stations. Pressure highest over Western Germany, with a deep depression off the north-west of Scotland and an imperfectly formed secondary disturbance over the west of Ireland. Main disturbance subsequently moving northwards, and barometer rising again in Scotland.







Thursday, January 5.

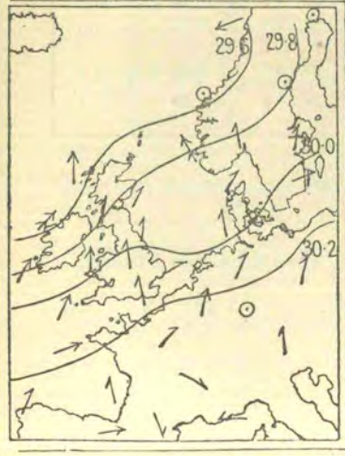
Weather fine in Spain, Germany, Holland, and the south of France, but cloudy elsewhere, with rain in many parts of Great Britain. Sky clearing later at many of our western and southern stations.

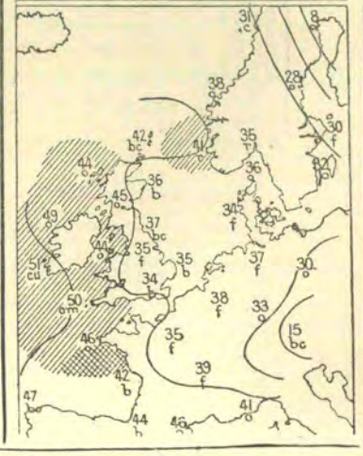
Temperature fallen a little in the west and north of our Islands but risen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 50° at Nairn and 48° at Jersey to 39° at Shields and Spurn Head.

Wind light from West in Ireland and strong from the same quarter in the south-east of England and the west of France, but fresh or strong from South or South-East elsewhere. Subsequently backing to South-West in the west of Ireland.

Sea rough on our south-west and north-east coasts.

Barometer rising on our western coasts, but falling elsewhere. Pressure highest over Germany, Switzerland, and the south of France, with a depression off the north-west of Scotland, and a secondary disturbance over the Irish Sea. Depressions subsequently moving eastwards, and barometer rising at all but the Scandinavian stations.





Friday, January 6.

Weather fine in Spain, the south-west of France, and the east of Great Britain, but cloudy elsewhere, with fog over the Netherlands. Slight rain falling later in the west and north of our Islands.

Temperature fallen at all but our western stations; readings over our Islands ranging at 8 a.m. from 51° at Valencia to 34° in London.

Wind chiefly Southerly or South-Westerly, strong in force over the Netherlands and the west of our Islands, but light or moderate elsewhere. Subsequently increasing to gale from South-West in the Hebrides.

Sea rather rough on our west and north-west coasts.

Barometer falling on our western coast and also in Scandinavia, but rising elsewhere. Large anticyclone lying over Spain, France, and Germany, with a depression off the west of Norway, and another approaching the west of Scotland. Latter disturbance subsequently moving north-eastward, and barometer falling on our northern coasts.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

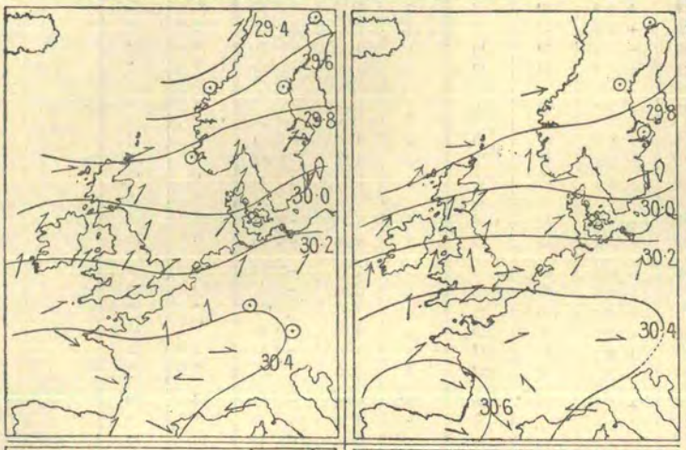
Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Saturday, January 7.

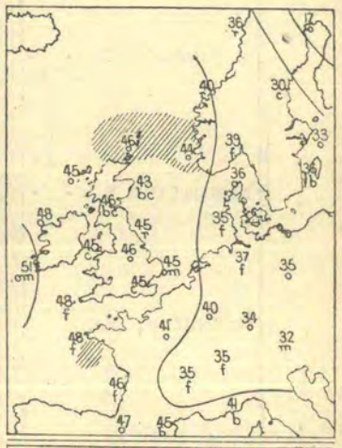
Weather fine in Scotland and the north and east of England, but cloudy elsewhere, with fog over the Bay of Biscay, the Channel, the Netherlands, and the south of Denmark. Rain falling late in Scotland and the west of Ireland.

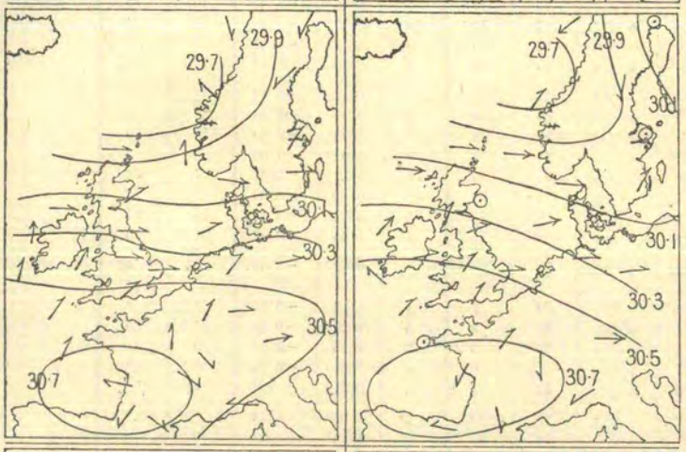
Temperature risen at all but the Irish stations; readings over our Islands ranging from 51° at Valencia to 42° at Wick, Spurn Head, and Donaghadee. Maxima above 50° at many of our northern and eastern stations.

Wind moderate South-Westerly in morning, but subsequently freshening on our extreme western and northern coasts.

Sea rather rough in the extreme north, but moderate to smooth elsewhere.

Barometer rising generally. Anticyclone lying over Spain and the southern part of the Bay of Biscay, with a depression off the north-west of Norway. New disturbance subsequently skirting our extreme north-west coasts.





Sunday, January 8.

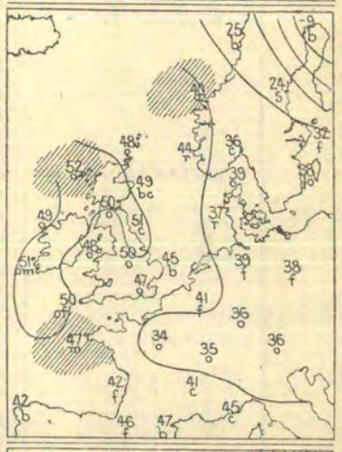
Weather fair over the eastern parts of Great Britain, but cloudy elsewhere, with fog over the Bay of Biscay, the Bristol and English Channels, Belgium, and North Germany. Rain falling late in the west and north of Scotland.

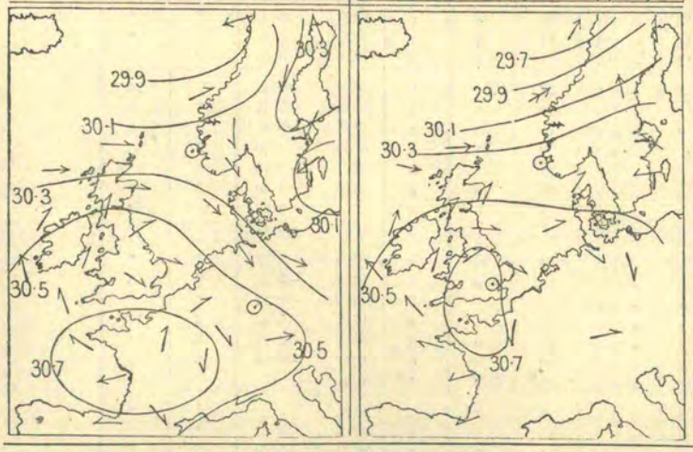
Temperature risen at all but the Swedish and western French stations; readings over our Islands ranging at 8 a.m. from 54° at Wick to 44° at Spurn Head. Subsequently reaching 55° at Aberdeen and York and 57° at Loughborough.

Wind moderate from the Westward and South-Westward, excepting in the west of Norway, where South-Easterly.

Sea rather rough at Stornoway and Holyhead, as well as at the mouth of the Channel, but slight or smooth elsewhere.

Barometer rising generally. Anticyclone lying over the Bay of Biscay and the west of France, with a large depression off the west of Norway. Anticyclone subsequently extending northwards, and barometer continuing to rise generally.





Monday, January 9.

Weather foggy over the west and south of England, with the adjacent Channels, and also over the Netherlands, the north of France, and the south of Denmark, but fair or fine in most other localities.

Temperature fallen in most places; readings over our Islands ranging at 8 a.m. from 52° at Nairn, Aberdeen, and Leith to 36° at Loughborough. Subsequently rising to 57° at Leith, 58° at Cambridge, 59° at Mullaghmore, and 63° at Durham.

Wind moderate Easterly in the west of France, and Southerly on our western coasts, but light Westerly in the east and variable at the more central stations.

Sea rough on our extreme western coasts, but moderate to smooth elsewhere.

Barometer rising at all but the Spanish and southern French stations. Anticyclone lying over France and the south of England, with a large but somewhat shallow depression off the north-west of Norway. Slight fall taking place later over France and our south-west coasts.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟩⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 1 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°					Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ⚓	49	35	47·1	39·9	43·6	+ 4·0	20	6	7	1·15	+0·27	*	*
	Stornoway	52	33	49·4	40·0	44·9	+ 5·8	29	6	6	1·41	+0·21	3	7
	Wick	54	30	49·0	37·9	43·7	+ 5·3	29	11	5	0·56	+0·01	*	*
	Lairg ⚓	52	32	48·0	38·6	43·5	+ 6·4	25	10	6	0·30	−0·55	*	*
	Glencarron ⚓													
	Fort Augustus ⚓	54	31	49·4	39·6	44·7	+ 6·7	29	7	5	1·47†	?	*	*
1. SCOTLAND, E.	Nairn	56	26	52·4	38·6	45·8	+ 8·2	41	10	4	0·07	−0·40	*	*
	Aberdeen	56	28	48·7	36·6	42·9	+ 5·8	29	15	4	0·58	−0·02	8	17
	Braemar ⚓	53	32	45·9	38·5	42·5	+ 8·4	18	10	4	1·77	+1·08	8‡	17‡
	Ochtertyre ⚓												*	*
	Leith	57	30	52·6	41·3	47·2	+ 9·6	39	2	2	0·24	−0·21	*	*
	Marchmont ⚓	53	30	47·4	36·0	41·9	+ 6·3	15	26	3	0·36	−0·30	6	12
2. ENGLAND, N.E.	Alnwick Castle	58	31	48·3	38·7	43·7	+ 6·5	26	9	3	0·17	−0·40	*	*
	Durham	63	31	48·6	36·6	42·8	+ 5·6	28	15	3	0·05	−0·48	10	20
	Shields	56	33	48·1	37·7	43·1	+ 4·7	26	12	0	—	−0·47	*	*
	Scarborough ℳ	54	33	45·6	37·8	41·9	+ 4·1	10	19	1	0·01	−0·49	9*‡	17*‡
	York	55	32	48·4	36·7	42·8	+ 4·8	28	15	1	0·01	−0·46	7	13
	Spurn Head	54	35	46·6	36·9	42·1	+ 3·5	22	14	3	0·03	?	*	*
3. ENGLAND, E.	Hillington ℳ	53	30	47·6	35·7	41·9	+ 4·7	16	28	2	0·05	−0·42	16	30
	Yarmouth	53	32	46·0	35·7	41·1	+ 2·9	11	27	2	0·08	−0·46	*	*
	Geldeston	57	32	47·8	37·3	42·8	+ 4·6	25	13	2	0·06	−0·46	16	30
	Cambridge	58	30	49·1	35·1	42·4	+ 4·7	32	19	4	0·07	−0·31	17	31
	Rothamsted	59	31	48·0	36·7	42·6	+ 5·3	26	15	4	0·09	−0·51	*	*
	Ingatestone	55	33	47·8	36·8	42·5	+ 4·4	25	15	2	0·14	−0·27	13‡	24‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	57	29	49·6	36·3	43·2	+ 4·7	32	16	2	0·03	−0·43	10‡	19‡
	Loughborough	57	30	49·7	35·3	42·8	+ 5·4	34	19	2	0·05	−0·44	*	*
	Leicester	53	35	47·8	38·0	43·1	+ 5·9	25	11	3	0·09	−0·39	10	19
	Cheadle ℳ	56	31	47·4	36·4	42·1	+ 4·9	24	16	3	0·09	−0·56	*	*
	Churchstoke ℳ	59	29	50·7	38·0	44·6	+ 6·5	35	11	3	0·11	−0·57	17	32
	Hereford ℳ	55	31	50·2	35·4	43·1	+ 4·8	35	18	1	0·05	−0·55	*	*
	Cirencester	51	?32	45·7	?38·1	?42·1	+?3·9	?17	?11	3	0·12	−0·61	13	24
	Oxford	51	32	47·1	37·6	42·5	+ 3·8	22	12	3	0·04	−0·47	7	13
5. ENGLAND, S.	London	51	32	48·6	37·1	43·1	+ 4·3	28	14	1	0·12	−0·37	2‡	4‡
	Strathfield Turgiss ℳ												*	*
	Dungeness	50	34	46·9	39·6	43·4	+ 3·2	20	7	4	0·15	−0·50	*	*
	Hastings (St. Leonard's)	49	33	47·0	38·9	43·1	+ 3·3	21	9	5	0·29	−0·38	11	20
	Southampton	53	31	48·8	39·1	44·1	+ 5·0	27	8	3	0·35	−0·42	9	16
	Hurst Castle	48	33	47·0	38·9	43·1	+ 2·4	21	9	4	0·31	−0·36	*	*
	Stowell ℳ	52	31	48·0	37·9	43·2	+ 3·5	26	11	2	0·24	?	8‡	15‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	55	39	50·6	43·6	47·2	+ 7·8	36	0	6	3·98†	+1·98	*	*
	Glasgow	52	32	47·9	38·4	43·3	+ 4·9	24	10	6	1·05	+0·04	9	18
	Ardrossan	52	29	48·6	40·4	44·7	+ 5·5	26	4	6	0·96	−0·04	*	*
	Glenlee	51	31	46·4	40·1	43·4	+ 5·3	18	5	7	4·34	?	*	*
	Douglas (Isle of Man)	52	33	48·7	41·3	45·2	+ 4·6	25	2	7	0·40	−0·60	2	4
7. ENGLAND, N.W.	Newton Reigny (Penrith)	54	31	48·4	37·8	43·3	+ 6·1	27	12	5	0·42	−0·43	7	14
	Barrow-in-Furness	47	38	45·3	39·3	42·4	+ 2·2	14	8	7	0·42	−0·44	*	*
	Stonyhurst	50	33	45·7	38·4	42·2	+ 3·9	17	10	5	0·41	−0·57	0	0
	Blackpool ℳ	47	?	45·7	?	?	?	?	?	5	0·26	−0·45	3	6
	Manchester	51	31	46·4	38·2	42·5	+ 3·7	19	11	6	0·44	−0·33	*	*
	Liverpool Obsr (Bidston)	53	35	49·3	38·6	44·2	+ 4·5	30	10	4	0·23	−0·30	*	*
	Llandudno ℳ	57	37	52·2	42·6	47·6	+ 6·3	39	0	4	0·62	−0·06	14	26
	Holyhead	51	37	48·7	42·9	45·9	+ 3·3	27	0	6	0·60	−0·21	*	*
8. ENGLAND, S.W.	Llandovery	50	28	48·7	37·0	43·1	+ 3·1	29	14	6	0·65	−0·59	*	*
	Pembroke	49	39	47·9	44·1	46·3	+ 3·7	30	0	5	0·46	−0·44	8	15
	Arlington (N. Devon)	54	33	48·7	39·7	44·4	+ 4·1	26	6	6	0·59	−0·21	*	*
	Cullompton ℳ	52	28	49·3	36·4	43·1	+ 1·9	31	16	4	0·32	−0·48	6	11
	Falmouth	55	39	49·9	42·3	46·3	+ 2·7	30	0	2	0·46	−0·82	8	14
	Plymouth	51	34	49·2	40·9	45·6	+ 3·3	30	3	4	0·56	−0·34	5	9
	Prawle Point	50	37	49·0	42·1	45·7	+ 3·6	26	0	5	0·40	?	*	*
9. IRELAND, N.	Malin Head	54	34	50·3	41·0	45·8	+ 5·6	31	3	5	0·91	?	*	*
	Londonderry	54	32	50·9	40·7	46·0	+ 5·0	33	4	3	0·83	−0·07	*	*
	Mullaghmore	59	35	53·9	41·3	47·9	+ 5·6	44	2	4	2·05	+1·20	*	*
	Belmullet	54	40	50·1	43·0	46·7	+ 2·6	33	0	6	1·81	?	*	*
	Markree Castle	54	26	50·9	38·4	44·9	+ 3·1	35	10	4	2·13	+1·34	13	25
	Brookeborough	59	29	50·8	38·6	44·9	+ 4·9	35	10	4	1·53	?	*	*
	Armagh	56	30	50·9	39·8	45·6	+ 6·0	34	6	4	0·91	+0·25	9	17
	Donaghadee	52	32	49·3	38·3	44·0	+ 3·3	30	10	5	1·13	+0·47	*	*
	Edgeworthstown	54	30	51·0	37·7	44·6	+ 5·4	36	12	6	1·41	+0·74	*	*
10. IRELAND, S.	Dublin	59	37	52·5	42·4	47·7	+ 6·9	40	0	3	0·56	+0·06	14	26
	Parsonstown	55	32	52·4	38·9	45·9	+ 5·9	40	9	3	0·96	+0·26	14	26
	Kilkenny	53	27	50·3	36·7	43·8	+ 4·1	35	15	4	2·03	+1·24	*	*
	Waterford	50	31	49·7	39·9	45·0	+ 3·4	30	6	6	2·03	+1·01	*	*
	Roche's Point ⚓	51	37	50·0	42·7	46·5	+ 3·5	32	0	6	2·87	+1·66	*	*
	Valencia ⚓	54	38	53·1	44·9	49·2	+ 4·0	50	0	5	2·52	+1·07	19	35
	Killarney ⚓	58	32	53·4	42·8	48·3	+ 5·0	44	0	5	4·73	?	*	*
	Foynes ⚓	55	40	52·6	42·9	47·9	+ 6·3	41	0	3	1·18	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	53	42	51·0	44·7	48·0	+ 1·8	42	0	7	0·40	−0·50	*	*
	Jersey (Noirmont)	51	41	49·3	42·7	46·2	+ 3·9	29	0	6	0·63	−0·15	11	19

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ⚓ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

(OFFICIAL COPY.)

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 2.] *Second Series.* WEEK ENDING MONDAY, 16TH JANUARY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 8.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	54	23	43·8	36·4	40·3	2 above.	5	0	22	−14	31	+21	30	−41
	1. SCOTLAND, EAST	54	23	42·9	32·3	36·9	2 above.	3	− 3	30	−15	33	+23	40 *	−45
	2. ENGLAND, N.E.	53	27	41·2	33·7	37·6	0 (average).	0	− 5	31	−11	24	+13	44	−29
	3. ENGLAND, EAST	57	27	38·9	31·3	35·3	2 below.	0	− 6	47	+ 1	26	+12	63	−20
	4. MIDLAND COUNTIES	52	22	36·5	29·2	33·0	5 below.	0	− 8	63	+17	28	+ 9	77	− 3
	5. ENGLAND, SOUTH	52	26	37·5	31·7	34·8	5 below.	0	− 9	50	+13	24 *	+ 4	60	− 3
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	52	31	43·1	37·0	40·4	2 above.	3	− 5	21	−15	28	+11	24	−40
	7. ENGLAND, N.W.	50	25	40·5	33·7	37·3	2 below.	0	− 7	33	− 3	24	+ 7	39	−23
	8. ENGLAND, S.W.	47	20	39·8	33·7	36·8	5 below.	0	−15	36	+14	27	− 7	40	+ 4
	9. IRELAND, NORTH	56	33	44·0	38·9	41·6	1 above.	6	− 5	13	−17	40	+13	19	−30
	10. IRELAND, SOUTH	52	28	43·9	39·2	41·6	0 (average)	5	−14	11	−11	41	+ 2	13	−23
	— CHANNEL ISLANDS	48	31	43·0	38·3	40·8	3 below.	3	−16	15	+ 2	39	− 3	15	− 4

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 8.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	2	1	8 less.	8	−2	1·2 *	−0·8	7	14	9 *	− 3	10	− 3
	1. SCOTLAND, EAST	2	1	6 less.	6 *	0	1·2 *	−0·1	10	19	17	− 4	17	− 5
	2. ENGLAND, N.E.	2	1	4 less.	4	−3	0·2	−0·8	5	9	14	0	13	0
	3. ENGLAND, EAST	1	1	4 less.	4	−4	0·2	−1·0	8	15	24	+ 4	22	+ 4
	4. MIDLAND COUNTIES	1	less than ½	5 less.	4	−3	0·1	−1·1	6	11	17	0	16	0
	5. ENGLAND, SOUTH	0	less than ½	6 less.	3	−4	0·2	−1·1	4	6	12	− 6	11	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	0	less than ½	10 less.	6	−2	2·2	−0·3	1	1	7	− 6	7	− 6
	7. ENGLAND, N.W.	0	less than ½	7 less.	5	−2	0·4	−1·1	2	4	8	− 7	8	− 6
	8. ENGLAND, S.W.	1	1	10 less.	6	−2	0·6	−1·5	1	1	8	−15	7	−14
	9. IRELAND, NORTH	0	-	8 less.	5	−4	1·4	−0·1	2	3	13	− 5	12	− 6
	10. IRELAND, SOUTH	0	less than ½	9 less.	4	−4	2·1	+0·2	10	17	26	+ 1	24	+ 1
	— CHANNEL ISLANDS	1	1	7 less.	8	−1	0·6	−1·1	10	17	21	−10	18	− 9

General Remarks.

Weather has been in a gloomy, foggy condition very generally. Over England and the greater part of Scotland the fogs were unusually dense, damp, and persistent. Towards the end of the period, however, the atmosphere became clearer, although a great deal of cloud prevailed.

Temperature has continued rather above the mean in Scotland, and in the north of Ireland, but has been below in nearly all the English districts, as well as in the "Channel Islands". Over central, southern, and south-western England the deficit was as much as 5°. The highest of the maxima, which were registered on the 10th, ranged from 47° in "England, S.W." and 48° in the "Channel Islands", to 56° in "Ireland, N." and 57° in "England, E." The lowest of the minima, which were recorded on irregular dates, varied from 20° in "England, S.W." and 22° in the "Midland Counties", to 31° in the "Channel Islands" and "Scotland, W." and 33° in "Ireland, N." During the greater part of the period the range of temperature was extremely slight.

Rainfall has been scarcely appreciable. At nearly all stations measurable amounts of water were deposited in the gauge by the wet fogs so prevalent during the week.

Bright sunshine has been very deficient, the percentage of the possible amount of duration ranging from 1 to 19 in Scotland, from 3 to 17 in Ireland, and from 1 to 16 in England. At many stations bright sunshine was altogether absent.

Depressions observed.—During the whole of this period the distribution of barometric pressure over our Islands and their neighbourhood has been anticyclonic, and no depressions have appeared in our area. Variable airs or calms were generally prevalent, but as the week drew towards its close moderate to fresh Easterly breezes sprang up over all our more southern districts.

* This value has been altered owing to the receipt of further information.

A 53035. 350.—1/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

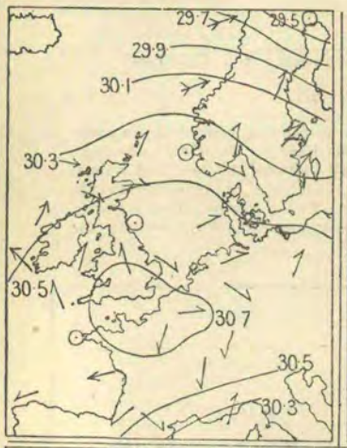
Weather

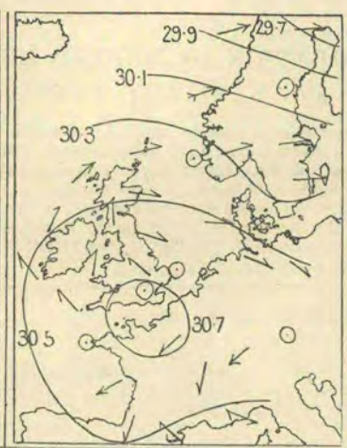
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, January 10.

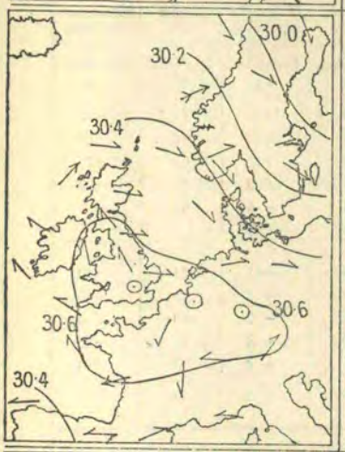
Weather foggy over England, Germany, the south of Denmark, and the east of Ireland, and dull in Scandinavia, but fine in the extreme west and north of our Islands.

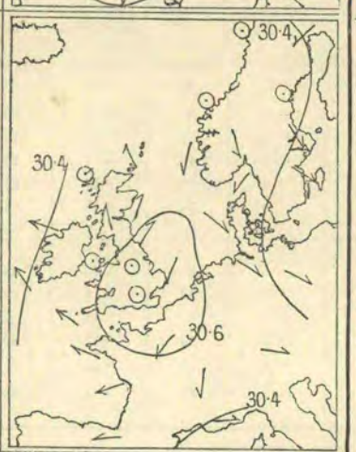
Temperature fallen several degrees over England, the east of Scotland, and the north of France, but risen elsewhere; readings over our Islands ranging from 52° at Nairn to 32° at Cambridge. Subsequently rising to 54° at Wick, Nairn, and Cambridge.

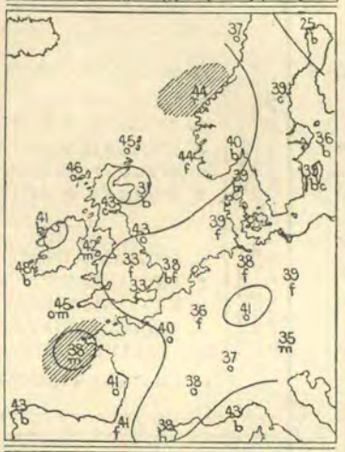
Wind moderate from East or North-East in France, and from South or South-West on our western and northern coasts, but light Westerly on the eastern shores of the North Sea, and variable over Central England.

Sea rather rough on our extreme south-west coasts, and also off the west of Norway, but moderate to smooth elsewhere.

Barometer falling in Sweden and also in Spain and the south of France, but rising elsewhere. Anticyclone lying over the south of England and the north of France, with a well-marked depression over the north of Sweden, and a shallower disturbance over the Gulf of Genoa. Swedish depression subsequently moving away eastwards.







Wednesday, January 11.

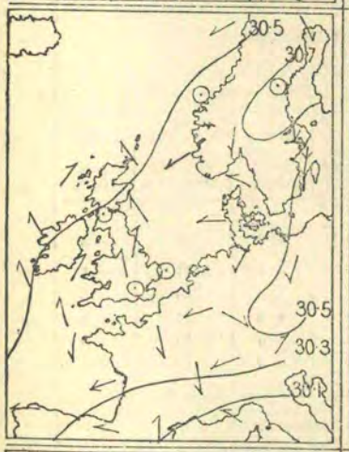
Weather foggy over England, the Netherlands, the greater part of Denmark and Germany, and the east of Ireland, but fair or fine in most other localities.

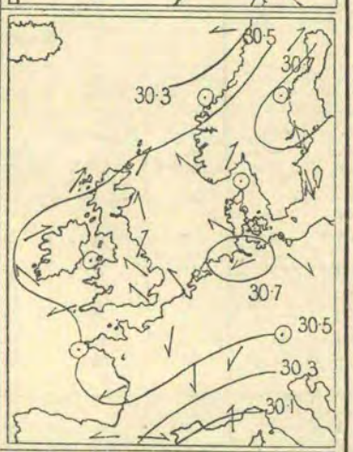
Temperature fallen a little generally; readings over our Islands ranging at 8 a.m. from 48° at Valencia to 30° at Loughborough. Maxima over Great Britain considerably lower than on previous day.

Wind moderate Easterly in France and Southerly in the west of our Islands, but light from West or North-West on the eastern shores of the North Sea, and variable over Central and Eastern England.

Sea moderate to smooth in most places.

Barometer rising a little over Great Britain, but falling elsewhere. Large anticyclone lying over England, Germany, and the north of France; depression of previous day passing away over Northern Russia. Slight fall taking place generally later.





Thursday, January 12.

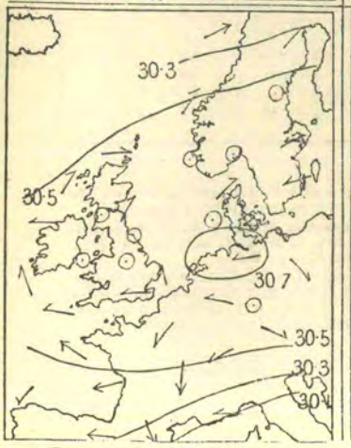
Weather foggy over the greater part of England and France as well as in the south and east of Scotland, but fair or fine in most other localities.

Temperature fallen a little in most places; readings over our Islands ranging at 8 a.m. from 49° at Valencia to 30° at Nairn, Shields, Loughborough, Liverpool, and Oxford.

Wind light or moderate from the Southward on our western and northern coasts, and variable in the south-east of England, but North-Easterly at most of the Continental stations.

Sea moderate in the south-west, but slight or smooth elsewhere.

Barometer rising quickly in Scandinavia, but falling slightly elsewhere. Anticyclonic band extending south-westwards from Central Sweden to the west of England, with lowest pressures over the Gulf of Genoa. Slight rise taking place over our Islands later.



Friday, January 13.

Weather still foggy over the greater part of England as well as in the Netherlands, the north and west of Scotland, and the south of Norway, but fine in Sweden and the east and south of France.

Temperature fallen several degrees in Germany and the south of Sweden, but changed irregularly elsewhere; readings over our Islands ranging from 46° at Stornoway and Valencia to 28° at Loughborough.

Wind moderate Easterly or North-Easterly over France and the south of England, but South-Westerly at our extreme northern stations, and variable over the more central districts. South-Easterly breezes setting in later in the west of Ireland.

Sea rather rough at the mouth of the Channel, but moderate to smooth elsewhere.

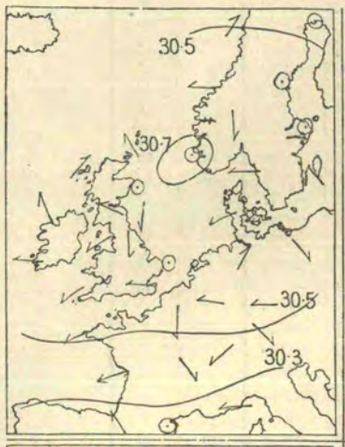
Barometer falling over Scandinavia and the Bay of Biscay, but rising elsewhere. Large anticyclone extending from Germany and the Baltic to the west of our Islands, with relatively low pressures over the north of Norway and the south of France. No important change later.

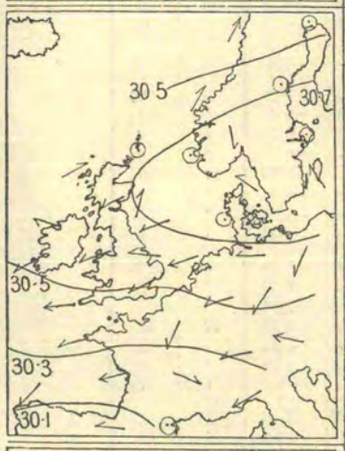
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

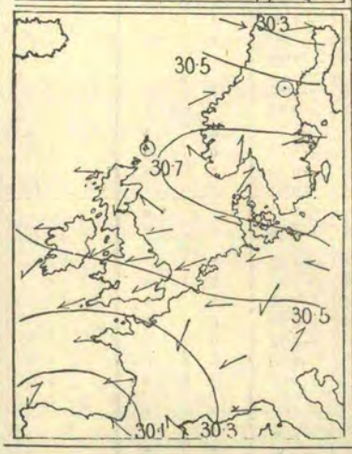
Synoptic Charts.

PRESSURE AND WIND.

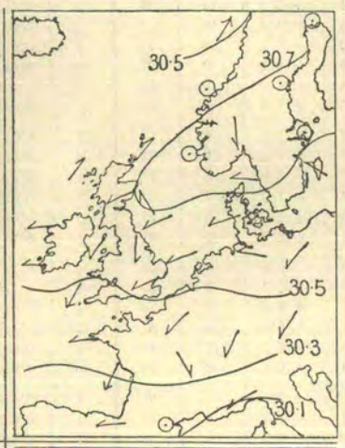
8 a.m.

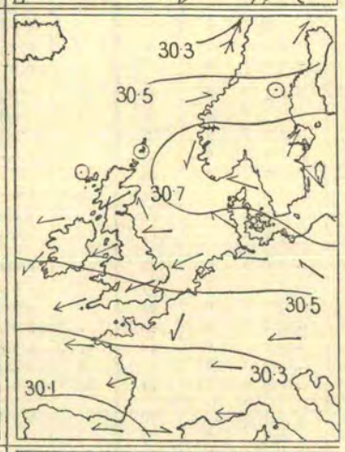


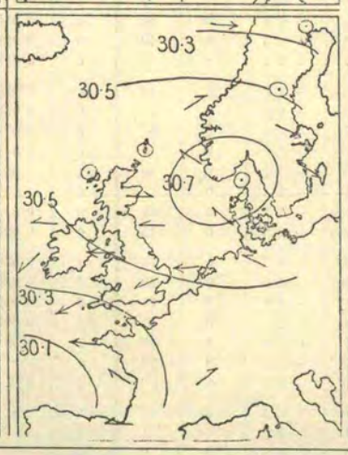




6 p.m.







Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, January 14.

Weather fair over the greater part of Scandinavia, and also in the south of France, but dull elsewhere, with mist or fog in many places and rain at Bodö and Stornoway. Some improvement taking place in south later.

Temperature fallen generally; readings over our Islands ranging at 8 a.m. from 43° at Stornoway to 31° at Oxford.

Wind moderate Easterly or North-Easterly over France, Denmark, and the greater part of England, but light and variable at all our more central stations and South-Westerly in the extreme north.

Sea rather rough at Brest, but slight or smooth elsewhere.

Barometer rising in Scandinavia, Denmark, and the north of our Islands, but falling elsewhere. Anticyclone now lying over Scandinavia, the North Sea, and the northern and western parts of the United Kingdom, with relatively low pressures over Spain. No important change later.

Sunday, January 15.

Weather fine in Scandinavia, Germany, and the greater part of France, but dull elsewhere, with snow at Nice. Sky clearing later at several of our southern stations.

Temperature fallen in most places; readings over our Islands ranging at 8 a.m. from 43° at Stornoway and 42° at Valencia to 33° at Cambridge and in London. Frost occurring in many places at night.

Wind South-Westerly in the west of Norway and calm in Sweden, but chiefly Easterly elsewhere; fresh or strong in force over the Channel and Bay of Biscay.

Sea rather rough in the English Channel, but moderate to smooth elsewhere.

Barometer rising in Scotland, Denmark, and the south of Scandinavia, but falling in most other localities. Central portion of anticyclone now extending from the Baltic to the east of Scotland, and large area of relatively low pressure lying over Spain. Slight rise taking place later in the south of France.

Monday, January 16.

Weather fair generally, but dull over the greater part of England, as well as in Denmark and the south of Scandinavia. Showers falling later at some of our south-western stations.

Temperature fallen in most places; readings over our Islands ranging at 8 a.m. from 40° at Wick, Malin Head, and Donaghadee to 30° at Oxford.

Wind moderate to strong from West in Scandinavia, but chiefly Easterly elsewhere; moderate gales reported at some of the Channel and south-eastern stations.

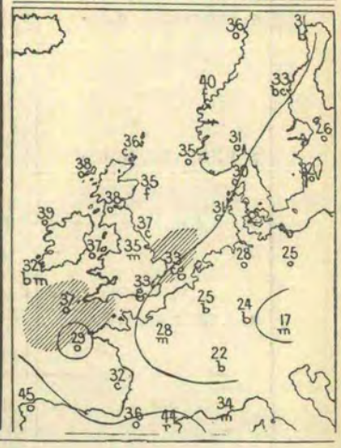
Sea rather rough at the entrance to the Channel, and also at Yarmouth, but moderate to smooth elsewhere.

Barometer falling generally. Anticyclone lying over the Baltic and the south of Scandinavia, with a large area of relatively low pressure over Spain. Low pressure area subsequently moving slowly in a north-westerly direction, and barometer rising in Spain and the south of France.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 5 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°					Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	50	33	45·0	39·6	42·4	+ 3·2	13	7	5	0·11§	−0·74	*	*
	Stornoway	49	32	45·3	40·1	42·8	+ 4·2	14	5	3	0·08	−1·10	6	13
	Wick	54	30	44·9	37·1	41·2	+ 3·1	8	21	1	0·06§	−0·41	*	*
	Lairg	52	23	42·0	31·4	36·9	− 0·1	0	36	2	0·04	−0·77	*	*
	Glencarron	52	29	41·6	35·2	38·5	+ 1·8	0	25	0	— †	?	7	15
	Fort Augustus	53	29	43·9	35·1	39·7	+ 1·9	5	27	1	0·02†	?	*	*
1. SCOTLAND, E.	Nairn	54	26	43·4	33·3	38·6	+ 1·3	4	33	1	0·01	−0·46	*	*
	Aberdeen	49	28	40·7	31·9	36·5	− 0·6	0	39	2	0·07§	−0·46	10	20
	Braemar	53	23	43·1	27·6	35·7	+ 2·0	3	54	1	0·02	−0·66	10‡	20‡
	Ochtertyre	54	25	44·0	31·3	37·9	+ 1·2	6	41	0	0·02§	−1·17	*	*
	Leith	54	31	43·7	36·3	40·2	+ 2·8	5	23	2	0·03§	−0·42	*	*
	Marchmont	53	27	42·6	33·6	38·3	+ 2·9	2	31	4	0·12	−0·53	9	18
2. ENGLAND, N.E.	Alnwick Castle	51	29	41·0	33·7	37·5	+ 0·4	0	32	4	0·14	−0·36	*	*
	Durham	53	27	40·7	32·8	36·9	− 0·3	0	36	4	0·11§	−0·38	5	10
	Shields	48	29	41·9	34·3	38·3	+ 0·2	0	26	1	0·05§	−0·35	*	*
	Scarborough	52	29	41·2	34·7	38·1	+ 0·5	0	27	2	0·12§	−0·30	4‡	7‡
	York	43	27	39·9	31·7	36·0	− 1·8	0	42	1	0·08§	−0·34	?	?
	Spurn Head	50	31	42·7	35·0	39·0	+ 0·4	2	26	0	0·02§	?	*	*
3. ENGLAND, E.	Hillington	49	29	37·3	30·7	34·1	− 2·6	0	55	1	0·08§	−0·34	8	15
	Yarmouth	51	31	39·4	34·0	36·8	− 1·3	0	36	1	0·08§	−0·40	*	*
	Geldeston	57	31	41·4	32·5	37·1	− 0·9	0	34	0	0·04§	−0·32	13	23
	Cambridge	54	27	38·7	29·3	34·2	− 3·0	0	55	0	0·02§	−0·34	6	11
	Rothamsted	52	28	37·7	30·1	34·1	− 3·1	0	55	1	0·04§	−0·48	*	*
	Ingatestone	56	29	38·8	31·4	35·3	− 2·4	0	47	0	0·03§	−0·37	5‡	9‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	51	28	39·0	30·9	35·1	− 3·1	0	48	2	0·10§	−0·32	5‡	9‡
	Loughborough	49	28	36·7	30·1	33·5	− 3·7	0	60	1	0·05§	−0·43	*	*
	Leicester	47	22	36·2	28·9	32·7	− 4·5	0	65	1	0·06§	−0·39	4	7
	Cheadle	52	24	37·0	29·2	33·3	− 3·4	0	61	1	0·04	−0·58	*	*
	Churchstoke	51	24	36·9	27·2	32·2	− 5·7	0	69	0	—	−0·66	17	31
	Hereford	47	27	36·4	29·5	33·1	− 4·9	0	62	0	0·03§	−0·57	*	*
	Cirencester	46	25	35·4	27·7	31·7	− 6·5	0	72	0	0·03§	−0·74	3	5
	Oxford	41	28	34·7	30·1	32·5	− 6·1	0	67	1	0·03§	−0·49	1	2
5. ENGLAND, S.	London	46	31	38·3	32·6	35·6	− 2·8	0	45	0	0·02§	−0·48	1‡	2‡
	Strathfield Turgiss	52	29	37·3	30·3	33·9	− 4·3	0	57	0	0·05§	−0·54	*	*
	Dungeness	41	30	38·3	33·6	36·1	− 3·8	0	41	0	0·04§	−0·58	*	*
	Hastings (St. Leonard's)	44	31	38·0	32·1	35·2	− 4·3	0	48	0	0·04§	−0·61	12	21
	Southampton	42	28	36·5	31·2	34·0	− 4·7	0	56	0	0·02§	−0·78	1	2
	Hurst Castle	45	30	39·1	32·6	36·0	− 4·4	0	42	0	0·06§	−0·64	*	*
	Stowell	44	26	35·3	29·5	32·5	− 7·2	0	67	0	0·04§	?	0‡	0‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	52	32	45·7	38·4	42·2	+ 3·1	17	10	0	0·01†§	−1·91	*	*
	Glasgow	48	31	42·8	35·1	39·1	+ 0·9	2	26	0	—	−1·02	1	2
	Ardrossan	47	34	42·9	38·1	40·6	+ 1·4	3	15	0	0·01§	−1·01	*	*
	Glenlee	45	33	41·6	36·8	39·3	+ 1·5	0	19	0	0·02§	?	*	*
	Douglas (Isle of Man)	45	37	42·5	38·7	40·7	+ 0·4	1	13	0	0·05§	−1·07	0	0
7. ENGLAND, N.W.	Newton Reigny (Penrith)	48	25	40·7	30·2	35·7	− 1·5	0	44	0	0·05§	−0·83	7	13
	Barrow-in-Furness	45	31	40·3	34·7	37·6	− 2·4	0	31	0	0·05§	−0·85	*	*
	Stonyhurst	48	27	40·4	32·6	36·7	− 1·5	0	37	0	0·01§	−0·94	2	4
	Blackpool	47	?	41·9	?	?	?	?	?	0	0·04§	−0·66	0	0
	Manchester	50	26	39·3	32·5	36·0	− 2·7	0	42	1	0·05§	−0·70	*	*
	Liverpool Obsy (Bidston)	47	30	39·6	34·1	37·0	− 2·4	0	35	0	0·05§	−0·47	*	*
	Llandudno	50	31	41·5	34·1	38·0	− 3·1	0	28	0	0·01§	−0·65	0	0
	Holyhead	45	35	42·0	38·0	40·1	− 2·2	0	13	0	0·02§	−0·78	*	*
8. ENGLAND, S.W.	Llandovery	40	20	35·4	26·9	31·3	− 8·5	0	75	1	0·03§	−1·22	*	*
	Pembroke	44	29	40·1	35·4	37·9	− 4·5	0	29	0	0·02§	−0·87	2	4
	Arlington (N. Devon)	47	26	38·4	30·6	34·7	− 5·5	0	51	0	0·01§	−0·97	*	*
	Cullompton	45	28	38·3	33·7	36·1	− 5·0	0	41	0	0·03§	−0·76	0	0
	Falmouth	46	32	43·0	38·2	40·7	− 2·5	3	15	1	0·38	−0·92	0	0
	Plymouth	47	31	41·1	35·1	38·2	− 4·0	0	27	0	—	−0·92	0	0
	Prawle Point	46	29	42·1	35·7	39·0	− 2·9	0	23	1	0·01	?	*	*
9. IRELAND, N.	Malin Head	48	38	43·3	39·7	41·6	+ 1·5	4	10	0	—	?	*	*
	Londonderry	51	35	43·6	39·4	41·6	+ 0·8	4	11	0	—	−0·91	*	*
	Mullaghmore	53	37	45·4	39·7	42·7	+ 0·3	15	6	0	—	−0·81	*	*
	Belmullet	52	37	45·1	40·4	42·9	− 1·3	13	4	0	—	?	*	*
	Markree Castle	48	33	42·9	37·7	40·4	− 1·6	3	16	0	—	−0·78	2	4
	Brookeborough	48	34	42·4	37·2	39·9	− 0·2	1	18	0	—	?	*	*
	Armagh	56	36	46·8	38·0	42·6	+ 3·1	21	11	0	—	−0·66	1	2
	Donaghadee	48	38	43·6	40·4	42·1	+ 1·6	7	4	0	—	−0·68	*	*
	Edgeworthstown	48	34	43·3	37·4	40·5	+ 1·3	4	18	0	—	−0·65	*	*
10. IRELAND, S.	Dublin	48	36	43·6	37·9	40·9	+ 0·4	4	17	0	—	−0·49	5	9
	Parsonstown	49	29	43·0	38·0	40·6	+ 0·6	3	15	0	—	−0·70	6	11
	Kilkenny	46	33	42·4	38·6	40·6	+ 1·2	1	13	0	—	−0·81	*	*
	Waterford	46	31	41·1	38·9	40·1	− 1·2	0	13	1	0·10	−0·96	*	*
	Roche's Point	49	39	44·9	41·6	43·4	+ 0·7	11	1	1	0·09§	−1·18	*	*
	Valencia	52	28	47·0	41·0	44·1	− 1·0	19	3	0	—	−1·51	18	32
	Killarney	52	29	45·4	39·0	42·3	− 0·9	15	8	1	0·01	?	*	*
	Foynes	51	33	43·4	38·2	40·9	− 0·5	4	15	0	—	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	48	34	44·6	39·9	42·5	− 3·7	12	6	1	0·17§	−0·73	*	*
	Jersey (Noirmont)	45	31	41·4	36·6	39·1	− 3·0	0	20	0	0·02§	−0·73	10	17

Stations marked ✠ are in connection with the Royal Meteorological Society, and those marked ✠ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

§ Value partially or wholly deposited by the fog.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 3.] *Second Series.* WEEK ENDING MONDAY, 23RD JANUARY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 12.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	51	12	42·3	31·1	37·0	1 below.	1	− 4	40	+ 4	32	+12	70	−35
	1. SCOTLAND, EAST	53	14	42·9	30·3	36·9	1 above.	3	− 3	43	− 1	36	+15	83	−45
	2. ENGLAND, N.E.	52	21	42·5	33·5	38·2	0 (average).	1	− 5	32	− 9	25	+ 6	76	−39
	3. ENGLAND, EAST	52	24	41·8	32·4	37·3	0 (average).	0	− 7	33	−11	26	+ 6	96	−37
	4. MIDLAND COUNTIES	55	21	42·2	32·7	37·6	0 (average).	1	− 7	34	−11	29	+ 1	111	−17
	5. ENGLAND, SOUTH	53	26	42·8	32·9	38·0	1 below.	2	− 7	33	− 3	26	− 3	93	−11
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	52	18	43·2	34·8	39·2	1 above.	3	− 5	27	− 8	31	+ 3	51	−48
	7. ENGLAND, N.W.	51	18	41·4	33·0	37·4	2 below.	0	− 8	32	− 2	24	− 2	71	−26
	8. ENGLAND, S.W.	55	25	45·3	36·6	41·2	0 (average).	9	− 7	23	+ 2	36	−11	63	+ 1
	9. IRELAND NORTH	56	25	45·4	37·0	41·4	0 (average).	10	− 1	21	− 8	50	+10	40	−49
	10. IRELAND, SOUTH	58	27	48·4	39·2	43·9	2 above.	25	+ 6	8	−12	66	+ 8	21	−42
	— CHANNEL ISLANDS	51	31	47·6	40·3	44·1	0 (average).	22	+ 3	5	− 7	61	+ 2	20	−15

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 12.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	4	6	2 less.	12	−3	1·8	−1·3	8	16	17	− 4	12	− 2
	1. SCOTLAND, EAST	2	1	4 less.	8	−1	1·3	−0·7	16	31	33	− 2	22	− 2
	2. ENGLAND, N.E.	2	2	3 less.	6	−3	0·4	−1·0	6	10	18 *	− 2	14	+ 1
	3. ENGLAND, EAST	2	2	3 less.	6	−4	0·4	−1·2	10	18	34	+ 8	20	+ 4
	4. MIDLAND COUNTIES	2	2	4 less.	6	−3	0·3	−1·4	9	16	26	+ 3	16	+ 2
	5. ENGLAND, SOUTH	2	3	3 less.	5	−4	0·5	−1·4	13	22	25	+ 2	15	+ 1
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	3	7	6 less.	9	−2	2·9	−0·9	4	7	11	−11	7	− 7
	7. ENGLAND, N.W.	3	4	4 less.	8	−2	0·8	−1·5	5	9	13	−10	8	− 6
	8. ENGLAND, S.W.	4	7	3 less.	10	−1	1·3	−1·8	14	23	22	−11	13	− 6
	9. IRELAND, NORTH	3	4	4 less.	8	−6	1·8	−0·5	5	8	18	−14	11	− 8
	10. IRELAND, SOUTH	3	5	5 less.	7	−5	2·6	−0·3	10	19	36	− 3	22	− 2
	— CHANNEL ISLANDS	5	6	2 less.	13	+1	1·2	−1·3	28	46	49	+ 5	28	+ 3

General Remarks.

Weather has continued cloudy or dull generally, with a good deal of mist or fog locally. Towards the end of the period, however, brief intervals of exceptionally fine weather for the season were experienced in some parts of England.

Temperature was low during the earlier part of the period, but subsequently rose decidedly, and, on the whole, the average for the week has not differed materially from the normal. The highest of the maxima, which were generally recorded on the 20th in Ireland and on the 23rd over Great Britain, varied from 51° in "Scotland, N.", "England, N.W.", and the "Channel Islands", to 55° in the "Midland Counties" and "England, S.W.", 56° in "Ireland, N.", and 58° in "Ireland, S." The lowest of the minima, which were recorded either on the 18th or 19th, ranged from 12° to 18° in Scotland, from 18° to 26° in England, and from 25° to 27° in Ireland; in the "Channel Islands" the lowest reading was 31°.

Rainfall has been considerably less than the mean in all districts.

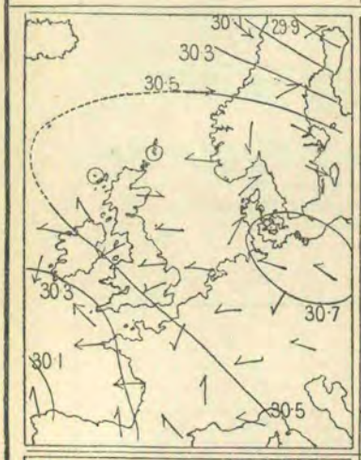
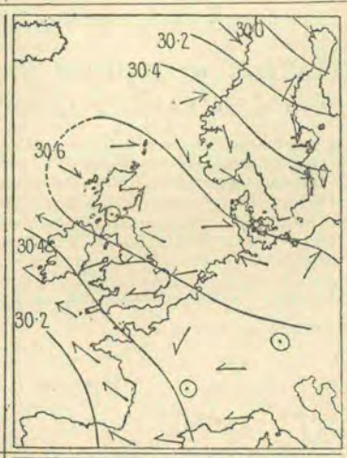
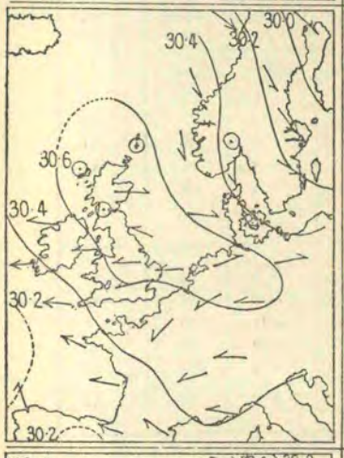
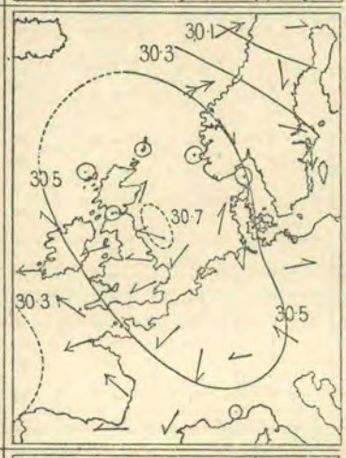
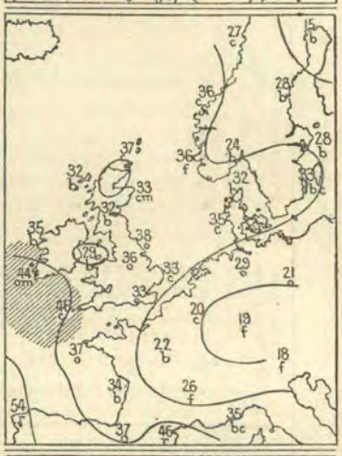
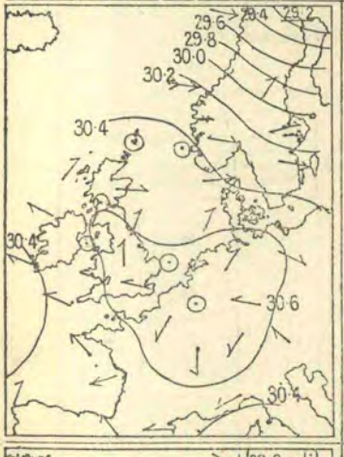
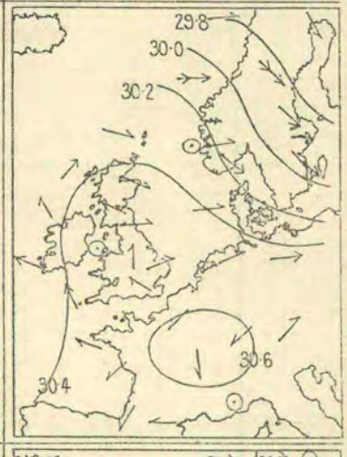
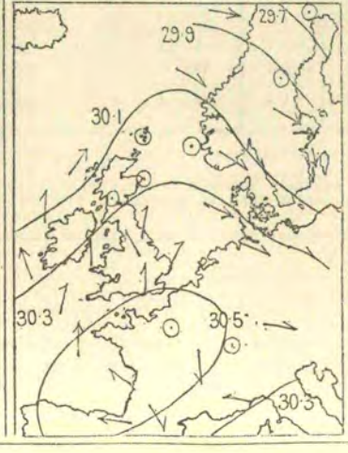
Bright sunshine has again been very deficient in most districts, the percentage of the possible amount of duration ranging from 7 to 23 over the greater part of the Kingdom; in "Scotland, E.", however, 31 % and in the "Channel Islands" 46 % was recorded.

Depressions observed.—The distribution of barometric pressure over our Islands and their neighbourhood continued anticyclonic until towards the end of the period, when the high pressure area moved southwards to France and Spain, and depressions commenced to travel north-eastwards off the north of Scotland, while some subsidiary disturbances passed over our Islands and the North Sea. Moderate breezes from the eastward were general over the United Kingdom until the 20th, when they drew into south-east or south; subsequently the wind shifted to the Westward or North-Westward and blew freshly or strongly on our west and north-west coasts, and at Wick increased to the force of a gale.

* This value has been altered slightly owing to the receipt of further information.

A 53097. 350.—1/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather during the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, January 17.** *Weather* showery on our extreme south-west coasts, and dull in Scandinavia, Denmark, and the north-east of our Islands, but fair or fine elsewhere. *Temperature* risen in the south-west of our Islands and the west of France, but fallen in most other localities; readings over the United Kingdom ranging at 8 a.m. from 46° at Scilly to 27° at Nairn. Frost occurring in many parts of our Islands at night. *Wind* Easterly or South-Easterly at all but the Scandinavian stations, where chiefly Westerly; moderate Easterly gale blowing in the western half of the English Channel. *Sea* rough in the south-west and also at Christiansund, but moderate to smooth elsewhere. *Barometer* rising a little in France, Germany, and the south of our Islands, but falling elsewhere. Anticyclone lying over North Germany, with a depression over the north of Sweden and a shallow disturbance off the north-west of Spain. No important change later.	
		**Wednesday, January 18.** *Weather* fair generally, but a good deal of cloud reported locally, and fog prevailing over Germany and the Netherlands. *Temperature* fallen slightly in most places; readings over our Islands ranging at 8 a.m. from 46° at Scilly to 20° at Nairn. Frost occurring over Great Britain at night. *Wind* moderate to strong from North-West in Scandinavia, but Easterly or South-Easterly elsewhere; moderate Easterly gale still blowing at the mouth of the Channel. *Sea* rough on our south-west coasts, but moderate to smooth elsewhere. *Barometer* rising at all but the Swedish, Danish, and German stations. Anticyclone lying over the greater part of England, Scotland, and the Netherlands. Northern depression of previous day passing away over Finland, but shallow areas of relatively low pressure lying over and to the north-westward of the Spanish Peninsula.	
		**Thursday, January 19.** *Weather* fine in Denmark, France, and the eastern parts of Great Britain, but cloudy elsewhere, with fog in Belgium and North Germany. Showers falling later in extreme south-west. *Temperature* fallen several degrees on our north-east coasts, but risen elsewhere; readings over our Islands ranging at 8 a.m. from 47° at Scilly to 20° at Nairn. Frost again occurring over Great Britain at night. *Wind* Westerly or North-Westerly in Scandinavia, but Easterly or South-Easterly over the greater part of Western Europe; strong in force on our extreme south-west coasts, and also in the north-west of Norway. *Sea* rough off the west of Norway and rather rough on our south-west coasts, but moderate to smooth elsewhere. *Barometer* falling at all but the French and German stations. Large anticyclone lying over the Netherlands, Germany, the east of France, and the greater part of England, with a deep depression over the north of Sweden. Anticyclone subsequently receding in a south-easterly direction, and barometer falling in all parts of our Islands.	
		**Friday, January 20.** *Weather* fine over the south of France and the eastern parts of Great Britain, but cloudy or overcast elsewhere, with fog in the west and north of England, and rain in the south of Ireland. Rain extending later in most of our western stations. *Temperature* risen several degrees in the west and north, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 50° at Valencia and Scilly to 22° at York. Brisk rise taking place over England later. *Wind* moderate South-Easterly or Southerly on our western coasts, but Westerly in the east and North-Westerly on the eastern shores of the North Sea. *Sea* rather rough at Christiansund and Brest, but moderate to smooth elsewhere. *Barometer* falling at all but the Scandinavian stations. Large anticyclone lying over France and Spain, with a depression over Finland, and another moving north-eastwards outside our extreme western coasts.	

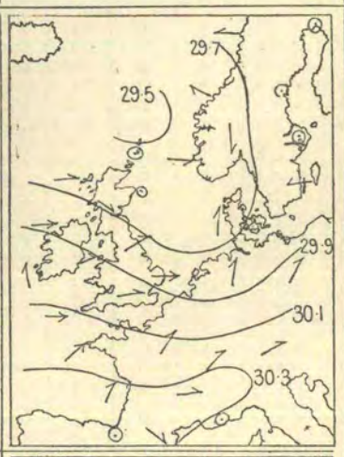
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.

6 p.m.



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, January 21.

Weather fine in Sweden and the south of France, but dull elsewhere, with fog at several of our western and northern stations, and rain over England.

Temperature risen several degrees in our Islands and the north of France, but fallen in most other localities; readings over the United Kingdom ranging at 8 a.m. from 50° at Scilly to 40° at Spurn Head.

Wind chiefly South-Westerly and moderate or fresh in force, but Westerly in Sweden and Easterly in the south of France. Subsequently veering to west in many parts of our Islands.

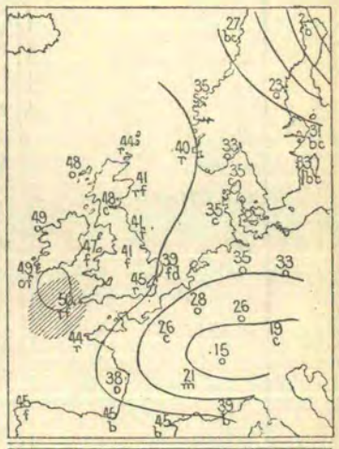
Sea rather rough at the mouth of the Channel, but moderate to smooth elsewhere.

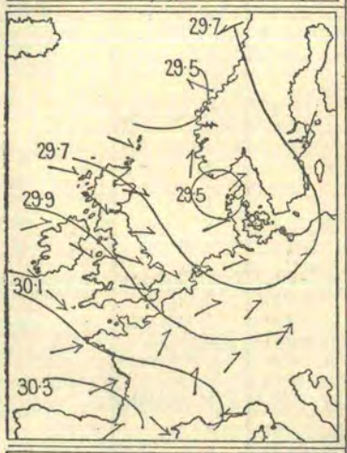
Barometer falling generally,—most in the north. Anticyclone lying over Spain and France, with a well defined and rather deep depression off the north of Scotland. Secondary disturbance forming subsequently over the northern part of the North Sea.

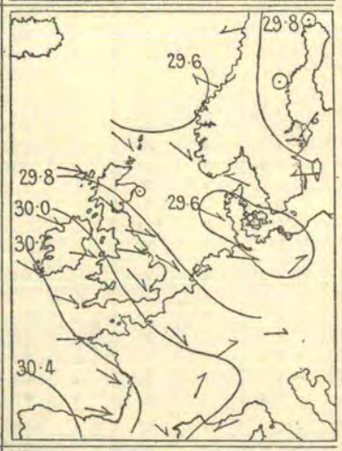
Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.







Sunday, January 22.

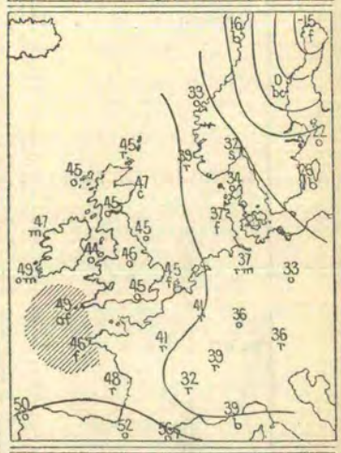
Weather cloudy generally with fog over the south-west of England, the north-west of France, and the Netherlands, and rain in South Germany and the east of France.

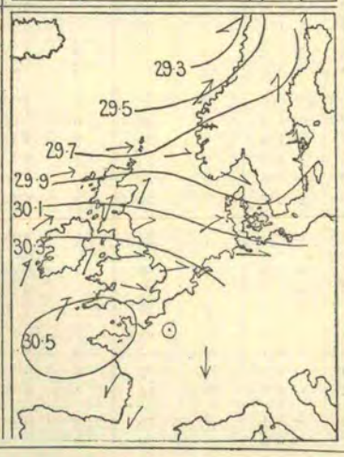
Temperature fallen in Scandinavia and the west of our Islands, but risen elsewhere; readings over the United Kingdom ranging from 49° at Valencia and Scilly to 42° at Liverpool.

Wind moderate Westerly or North-Westerly over the greater part of our Islands and France, but light South-Westerly in Germany and Denmark and Easterly in Scandinavia.

Sea rough at the mouth of the Channel, but moderate to smooth elsewhere.

Barometer falling at all but our western and northern stations. Anticyclone lying over Spain, with a depression off the west of Norway, and a large secondary disturbance to the southward of that country. Rise taking place generally later.





Monday, January 23.

Weather fair over the greater part of our Islands, but dull and unsettled at most of the Continental stations, with fog over North Germany and rain at Munich and Rochefort. Slight rain falling later at several of our western and south-western stations.

Temperature fallen generally; readings over our Islands ranging at 8 a.m. from 48° at Stornoway, Nairn, Ardrossan, Belmullet, and Valencia to 39° at York and Cambridge. Subsequently rising above 50° at several of our western and northern stations.

Wind moderate South-Westerly in north-west, but North-Westerly or Northerly at our eastern, southern, and the French stations. Subsequently increasing to strong gale from West in the extreme north of Scotland.

Sea rough at Stornoway and Brest, but moderate to smooth elsewhere.

Barometer rising at all but the Scandinavian stations. Anticyclone extending from Portugal to the south-west of our Islands, with a depression off the north-west of Norway, and the secondary disturbance over the Baltic. New disturbance subsequently passing north-eastwards along our extreme north-west coasts.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

DATE OF REPORT.	NAMES OF STATIONS.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°					inches.	inches.		
Week ending 9 January	Glencarron	54	35	48·0	39·8	44·1	+ 7·1	24	6	6	1·85	?	1	2
„ 9 „	Ochtertyre	55	33	49·4	39·1	44·5	+ 7·7	30	8	5	3·71	+ 2·57	*	*
„ 9 „	Strathfield Turgiss	52	32	47·9	36·8	42·6	+ 4·0	26	15	3	0·10	− 0·46	*	*
„ 16 „	York	—	—	—	—	—	—	—	—	—	—	—	0	0

III.—DATA from which the SUMMARY on page 9 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°					Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	48	33	44·4	38·9	40·8	+ 1·7	7	21	5	0·47	−0·36	*	*
	Stornoway	50	27	45·6	35·1	40·6	+ 1·9	10	28	4	0·49	−0·69	8	16
	Wick	50	22	43·1	30·0	36·8	− 1·3	3	45	2	0·20	−0·25	*	*
	Lairg	51	12	39·0	26·6	33·1	− 3·9	0	62	3	0·15	−0·63	*	*
	Glencarron	48	20	40·6	30·2	35·6	− 1·1	0	45	4	1·94†	?	?	?
	Fort Augustus	51	16	41·1	27·9	34·8	− 3·0	0	50	3	?0·30†	?	*	*
1. SCOTLAND, E.	Nairn	53	16	43·0	27·9	35·8	− 1·6	3	53	3	0·12	−0·33	*	*
	Aberdeen	51	22	43·1	30·7	37·2	+ 0·1	3	42	2	0·20	−0·33	15	29
	Braemar	49	14	40·8	28·2	34·8	+ 1·1	0	50	1	0·10	−0·59	20‡	38‡
	Ochtertyre												*	*
	Leith	51	25	44·9	34·0	39·7	+ 2·0	8	32	1	0·12	−0·33	*	*
	Marchmont	50	20	42·6	30·6	36·8	+ 1·3	2	42	2	0·17	−0·48	14	26
2. ENGLAND, N.E.	Alnwick Castle	50	23	42·9	35·6	39·4	+ 2·3	3	24	2	0·17	−0·32	*	*
	Durham	52	21	42·3	32·1	37·4	+ 0·2	1	36	2	0·08	−0·39	7	13
	Shields	50	25	43·3	33·1	38·4	+ 0·3	4	33	2	0·25	−0·15	*	*
	Scarborough	49	24	41·4	34·4	38·0	+ 0·3	0	28	2	0·20	−0·22	4‡	7‡
	York	51	22	43·0	31·7	37·6	− 0·4	3	39	2	0·11	−0·32	?	?
	Spurn Head	46	28	41·9	34·3	38·3	− 0·3	0	26	1	0·10	?	*	*
3. ENGLAND, E.	Hillington	49	26	41·3	33·0	37·3	+ 0·5	0	33	2	0·20	−0·22	11	19
	Yarmouth	48	29	41·1	32·4	36·9	− 1·5	0	36	2	0·10	−0·38	*	*
	Geldeston	51	29	41·8	33·6	37·9	− 0·3	0	29	1	0·09	−0·27	10	17
	Cambridge	52	24	43·4	30·4	37·2	− 0·2	4	44	1	0·21	−0·14	11	19
	Rothamsted	51	24	40·9	31·9	36·6	− 0·7	0	38	3	0·28	−0·34	*	*
	Ingatestone	50	28	42·0	33·2	37·8	− 0·1	0	29	2	0·20	−0·20	9‡	16‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	51	21	42·3	34·9	38·8	+ 0·3	1	26	1	0·07	−0·35	6‡	11‡
	Loughborough	53	24	42·3	32·6	37·6	+ 0·2	1	34	1	0·14	−0·35	*	*
	Leicester	52	26	43·4	34·1	38·9	+ 1·7	4	30	2	0·26	−0·19	5	9
	Cheadle	51	26	40·2	32·3	36·4	− 0·3	0	39	3	0·29	−0·34	*	*
	Churchstoke	54	27	41·7	31·9	37·0	− 0·9	0	35	1	0·15	−0·51	14	25
	Hereford	55	29	43·2	32·9	38·3	0·0	3	34	1	0·12	−0·50	*	*
	Cirencester	53	26	42·0	?30·6	?36·5	−?1·7	0	?39	3	0·29	−0·48	12	21
	Oxford	54	27	42·4	32·3	37·6	− 1·2	1	36	2	0·26	−0·25	7	12
5. ENGLAND, S.	London	51	30	43·3	34·1	38·9	+ 0·1	4	30	2	0·28	−0·22	5‡	8‡
	Strathfield Turgiss	51	26	43·1	31·4	37·5	− 0·8	3	40	2	0·32	−0·28	*	*
	Dungeness	50	29	41·7	33·4	37·7	− 2·2	0	30	1	0·17	−0·43	*	*
	Hastings (St. Leonard's)	50	29	41·5	33·6	37·7	− 1·7	0	30	2	0·38	−0·25	20	34
	Southampton	53	27	43·9	31·9	38·1	− 0·6	5	38	2	0·34	−0·46	18	31
	Hurst Castle	51	28	43·4	33·1	38·5	− 1·9	4	34	2	0·34	−0·35	*	*
	Stowell	50	26	42·5	32·5	37·7	− 2·3	1	35	2	0·47	?	9‡	15‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	52	28	44·2	37·0	40·7	+ 1·6	6	20	4	1·54†	−0·37	*	*
	Glasgow	50	24	42·4	32·6	37·7	− 0·6	1	35	2	0·36	−0·65	4	7
	Ardrossan	50	26	44·0	34·0	39·2	0·0	6	31	4	0·44	−0·56	*	*
	Glenlee	51	18	41·7	31·6	36·9	− 1·8	0	36	3	0·49	?	*	*
	Douglas (Isle of Man)	51	34	43·8	38·8	41·4	+ 1·1	5	13	3	0·57	−0·54	4	7
7. ENGLAND, N.W.	Newton Reigny (Penrith)	49	18	42·4	29·5	36·2	− 1·0	1	46	2	0·16	−0·71	14	25
	Barrow-in-Furness	46	29	41·0	33·7	37·5	− 2·5	0	32	3	0·45	−0·45	*	*
	Stonyhurst	46	25	39·9	33·2	36·7	− 1·5	0	37	3	0·75	−0·20	0	0
	Blackpool	45	27	39·8	33·1	36·6	− 3·6	0	38	4	0·37	−0·31	1	2
	Manchester	47	26	40·3	32·9	36·8	− 1·9	0	36	3	0·48	−0·34	*	*
	Liverpool Obsy (Bidston)	51	29	42·0	33·4	37·9	− 1·7	0	29	3	0·25	−0·25	*	*
	Llandudno													
	Holyhead	50	28	44·4	34·9	39·8	− 2·4	7	28	2	0·36	−0·42	*	*
8. ENGLAND, S.W.	Llandovery	51	25	42·9	33·9	38·6	− 1·3	3	30	3	0·56	−0·69	*	*
	Pembroke	49	30	44·1	36·7	40·6	− 1·9	6	21	5	0·65	−0·23	14	24
	Arlington (N. Devon)	49	27	43·6	34·0	39·0	− 1·2	4	31	4	1·10	+0·14	*	*
	Cullompton	54	28	44·4	34·1	39·5	− 1·5	7	31	3	0·45	−0·34	13	22
	Falmouth	53	37	47·8	42·3	45·2	+ 2·1	22	0	3	0·47	−0·83	9	15
	Plymouth	52	31	46·3	37·4	42·0	− 0·4	12	13	4	0·71	−0·21	18	30
	Prawle Point	55	33	47·9	38·1	43·2	+ 1·1	25	11	3	0·86	?	*	*
9. IRELAND, N.	Malin Head	50	32	44·6	37·6	41·2	+ 1·1	7	18	4	0·23	?	*	*
	Londonderry	52	28	45·5	36·5	41·2	0·0	10	23	2	0·39	−0·51	*	*
	Mullaghmore	56	33	46·7	38·3	42·7	+ 0·5	20	10	4	0·48	−0·34	*	*
	Belmullet	50	30	46·6	38·0	42·5	− 2·1	20	11	4	0·51	?	*	*
	Markree Castle	51	25	44·8	34·9	40·1	− 1·9	8	29	3	0·36	−0·42	6	11
	Brookeborough	50	29	43·9	36·0	40·1	− 0·1	5	23	2	0·42	?	*	*
	Armagh	51	29	45·3	36·4	41·0	+ 1·3	9	23	2	0·30	−0·38	3	5
	Donaghadee	51	35	46·0	39·4	42·8	+ 2·3	17	7	2	0·40	−0·29	*	*
	Edgeworthstown	51	25	45·6	35·6	40·8	+ 1·6	10	26	2	0·34	−0·32	*	*
10. IRELAND, S.	Dublin	54	33	46·7	38·3	42·7	+ 2·1	20	10	2	0·17	−0·32	9	16
	Parsonstown	53	27	47·6	36·6	42·3	+ 2·2	25	15	2	0·32	−0·38	13	25
	Kilkenny	53	32	47·9	37·4	42·9	+ 3·4	26	13	2	0·25	−0·56	*	*
	Waterford	55	32	48·1	37·3	42·9	+ 1·6	26	13	3	0·48	−0·62	*	*
	Roche's Point	53	34	48·6	40·9	44·9	+ 2·0	25	3	3	1·25	−0·04	*	*
	Valencia	55	31	50·3	42·0	45·3	+ 0·2	23	0	6	0·91	−0·60	9	16
	Killarney	54	33	49·5	41·0	45·4	+ 2·1	28	3	3	0·40	?	*	*
	Foynes	58	28	48·7	40·4	44·7	+ 3·4	26	4	3	0·46	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	51	35	49·3	43·6	46·6	+ 0·5	32	0	6	0·63	−0·25	*	*
	Jersey (Noirmont)	50	31	45·9	36·9	41·6	− 0·5	11	22	3	0·51	−0·19	28	46

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 4.] *Second Series.* WEEK ENDING MONDAY, 30TH JANUARY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 16.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	51	18	39·8	30·5	35·4	3 below.	0	− 6	46	+13	32	+11	116	−27
	1. SCOTLAND, EAST	52	22	41·9	32·8	37·6	1 above.	0	− 7	31	−10	36	+14	114	−67
	2. ENGLAND, N.E.	51	14	41·7	32·7	37·3	1 below.	0	− 7	33	− 2	25	+ 4	109	−58
	3. ENGLAND, EAST	49	10	40·8	31·0	36·1	2 below.	0	− 9	41	+ 2	26	+ 2	137	−45
	4. MIDLAND COUNTIES	53	16	42·1	31·5	37·0	2 below.	0	−10	38	− 2	29	− 4	149	−33
	5. ENGLAND, SOUTH	50	18	42·4	31·9	37·3	2 below.	1	−10	37	+ 5	27	− 8	130	−16
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	52	18	42·4	32·8	37·8	1 below.	1	− 8	34	+ 6	32	+ 1	85	−57
	7. ENGLAND, N.W.	51	21	42·1	35·0	38·7	1 below.	0	− 9	26	− 2	24	− 5	96 *	−47
	8. ENGLAND, S.W.	48	16	43·1	32·6	38·1	4 below.	3	−15	35	+19	39	−22	98	+ 9
	9. IRELAND NORTH	54	16	44·8	34·7	40·0	1 below.	8	− 5	29	+ 3	58	+13	69	−52
	10. IRELAND, SOUTH	56	18	45·9	35·7	41·0	1 below.	11	− 9	26	+ 9	77	+ 3	47	−41
	— CHANNEL ISLANDS	49	30	45·1	37·9	41·7	3 below.	9	−12	18	+ 9	70	− 6	38	−13

Rainfall.

Bright Sunshine.

	DISTRICTS. (See p. 16.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	6	19	5 more.†	18	−1	3·5	−1·2	8	15	25	− 1	13	0
	1. SCOTLAND, EAST	6	9	3 more.	14	+2	2·2	−0·5	15	28	48	0	23	− 1
	2. ENGLAND, N.E.	5	4	1 less.	11	−2	0·8	−1·1	16	28	31 *	+ 3	14	+ 1
	3. ENGLAND, EAST	4	3	1 less.	10	−4	0·7	−1·4	21	34	55	+14	24	+ 6
	4. MIDLAND COUNTIES	4	2	4 less.	10	−3	0·5	−1·8	17	29	43	+11	19	+ 5
	5. ENGLAND, SOUTH	4	2	5 less.	9	−4	0·7	−1·8	21	34	46	+13	20	+ 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	5	10	3 less.	14	−1	3·9	−0·6	20	35	31	+ 2	14	0
	7. ENGLAND, N.W.	4	5	3 less.	12	−2	1·3	−1·8	17	29	33 *	+ 1	15	0
	8. ENGLAND, S.W.	4	4	8 less.	14	−1	1·7	−2·4	24	39	46	+ 5	20	+ 2
	9. IRELAND, NORTH	5	7	1 less.	13	−4	2·5	−0·5	24	40	42	0	19	0
	10. IRELAND, SOUTH	3	2	7 less.	10	−6	2·8	−1·1	20	34	56	+ 6	25	+ 2
	— CHANNEL ISLANDS	4	3	5 less.	17	+1	1·5	−1·7	26	41	75	+19	31	+ 7

General Remarks.

Weather has been somewhat changeable, but finer than of late in most parts of the Kingdom. A good deal of cloud prevailed at times, with some showers of rain, sleet, or snow; in Scotland the rain and snow were heavy, but over England and the greater part of Ireland the falls were slight.

Temperature has been a little above the mean in "Scotland, E.", but below in all other districts, the deficit in the "Channel Islands" being 3° and in "England, S.W." 4°. The highest of the maxima, which were registered during the earlier days of the period, ranged from 48° in "England, S.W." to 56° in "Ireland, S." The lowest of the minima were recorded on the 30th, when the thermometer fell as low as 10° at Geldeston, and to between 14° and 18° at many of the other English stations, between 16° and 22° over Ireland and Scotland, and to 30° in the "Channel Islands".

Rainfall has been more than the mean in the north and east of Scotland, but less in all other districts.

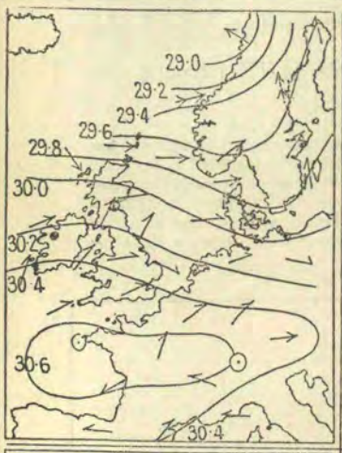
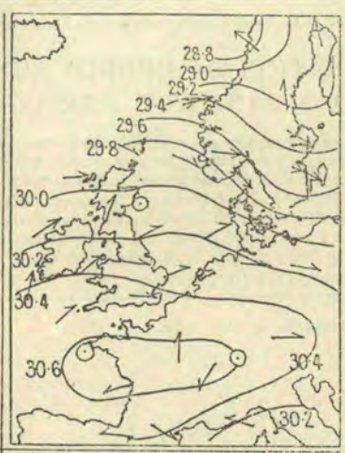
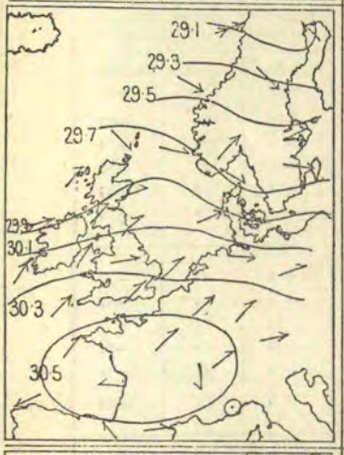
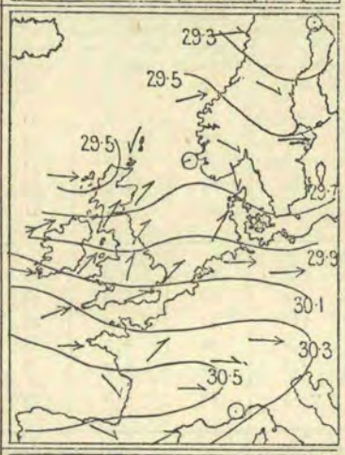
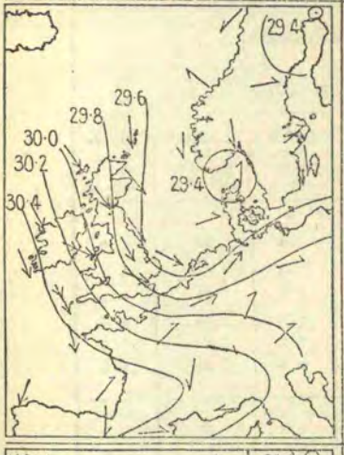
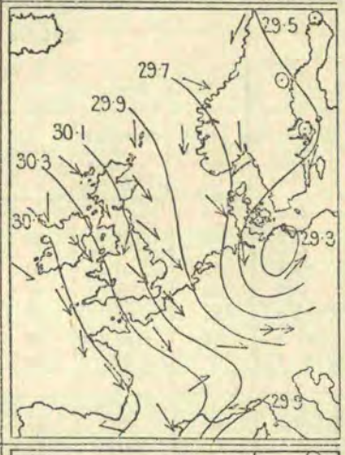
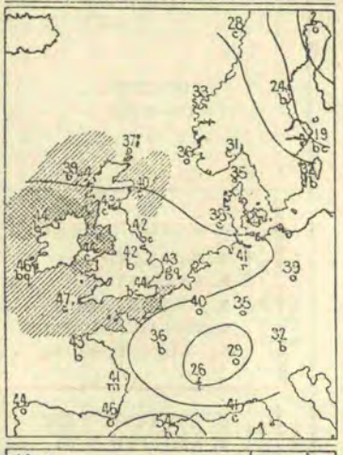
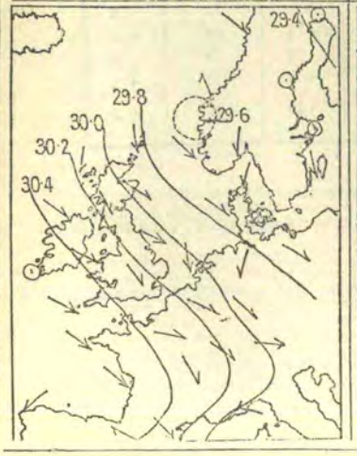
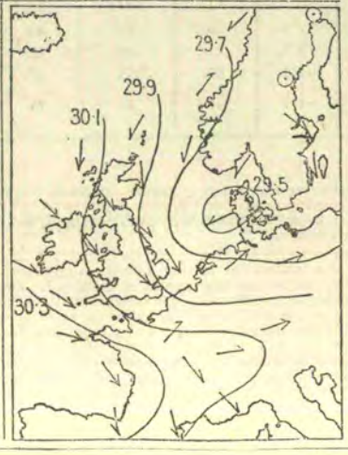
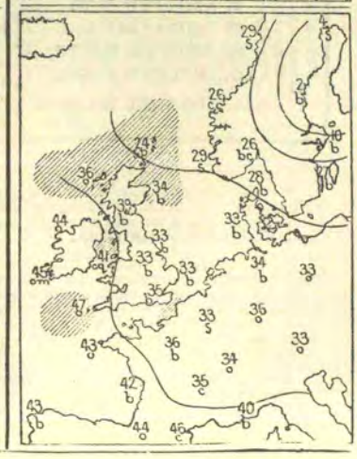
Bright sunshine shows a very general increase, the percentage of the possible amount of duration varying from 15 in "Scotland, N." to 34 in "England, E.", "England, S.", and "Ireland, S.", 35 in "Scotland, W.", 39 in "Ireland, N." 40 in "England, S.W.", and 41 in the "Channel Islands".

Depressions observed.—During the earlier part of this period the barometer continued highest to the southward of our Islands, and depressions travelled in an easterly direction over or to the northward of Scotland. By the 28th, however, the highest pressure had been transferred to the western and northern parts of the United Kingdom and a depression moved south-south-eastwards from the west of Norway to Germany. By the end of the period, pressure was giving way decidedly over our northern coasts, and a depression was evidently approaching our Islands from the north-westward. South-Westerly to Westerly winds, reaching the force of a gale at many of our northern and western stations, prevailed during the earlier days of the week, and subsequently North-Westerly to Northerly winds, but at the end of the period South-Westerly winds had again set in on our more northern coasts and Westerly winds elsewhere.

* This value has been altered owing to the receipt of further information.
† The corresponding value for last week should be "5 less."

A 53171. 350.—2/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

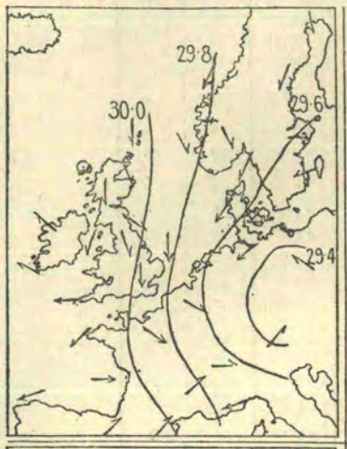
Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, January 24.** *Weather* fine in the east and south-east of England, and the west and south of France. Dull elsewhere, with fog over Central France, and slight rain in the extreme north-west. *Temperature* fallen on the Continent and in the extreme north of Scotland, but risen elsewhere; readings over the United Kingdom ranging from 49° at Shields, Mullaghmore, and Belmullet to 37° at Oxford. *Wind* light to fresh from South-West and West over our Islands, the North Sea, and Germany; strong in the far north, and blowing a gale at Christiansund. Easterly and North-Easterly in the west and south of France. *Sea* rough in the extreme north and at Mullaghmore; moderate to smooth elsewhere. *Barometer* falling quickly over Scandinavia, but rising elsewhere. Large anticyclone lying over France, with a depression passing to the northward of Scandinavia. Slight fall taking place in the west of our Islands later.	
		**Wednesday, January 25.** *Weather* fine in Spain and the south of France, as well as in the east of England; dull elsewhere, with rain in Ireland and Scotland. Sleet showers falling later in extreme north-west, and rain in most parts of the United Kingdom. *Temperature* fallen in the north and over France, but risen a little elsewhere; readings over our Islands ranging from 50° in the west of Ireland to 37° at Nairn. *Wind* strong from South-West in the extreme west and north-west; moderate from South-West over our Islands and the north of France, but fresh from West over Scandinavia, Denmark, and Germany. *Sea* rough in the west and south-west, and off the west of Norway; moderate to smooth elsewhere. *Barometer* falling generally, most in the west. Large anticyclone still lying over France, with a depression over the north of Norway travelling away in a north-easterly direction. New disturbance subsequently appearing off our extreme north-west coasts.	
		**Thursday, January 26.** *Weather* fine over greater part of Ireland and England as well as in Sweden, showery in the north of Ireland and Scotland, foggy at several of the French stations. showers of hail or sleet during the day at most of the northern and north-western stations. *Temperature* fallen except in the south of England; readings over our Islands ranging at 8 a.m. from 47° at Scilly and Jersey to 37° at Wick. Slight frost occurring at night in many parts of Great Britain. *Wind* strong to gale from West or North-West over our Islands and the north of France, moderate South-Westerly over Germany, the Netherlands, Denmark, and Central France. Strong North-Westerly winds subsequently becoming general. *Sea* high on north-west coasts, rough in the west, south, and north, moderate in the east. *Barometer* falling very quickly over the south of England, as well as in Germany and France, rising fast in the north and west. Depression off Hebrides last night travelled quickly across North Sea to Denmark, and secondary disturbance moving south-eastwards to Holland. Rise taking place generally later.	
		**Friday, January 27.** *Weather* dull in Belgium and Germany, but fair in most other localities, with, however, heavy falls of snow in the north of Scotland, Snow showers extending later to many parts of the Kingdom. *Temperature* fallen generally; readings over our Islands ranging at 8 a.m. from 47° at Scilly to 24° in the Shetlands. Frost occurring in most places at night. *Wind* strong to a gale from North in the north of Scotland, but moderate or fresh from the North-Westward elsewhere. Subsequently increasing to strong breeze in most parts of the Kingdom. *Sea* rough on many parts of our western and northern coasts. *Barometer* falling a little in the west and north of our Islands and also in Norway, but rising elsewhere. Anticyclone lying over the Bay of Biscay, with small shallow depression over the west of Norway. Depression subsequently growing deeper and travelling southwards across Denmark, occasioning general fall of barometer.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

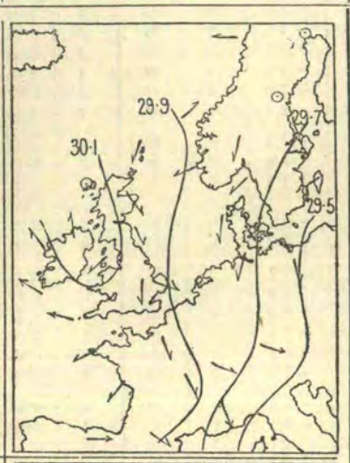
Synoptic Charts.

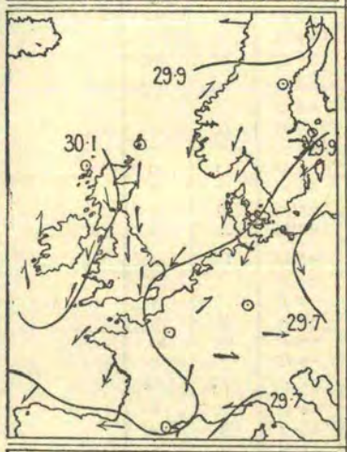
PRESSURE AND WIND.

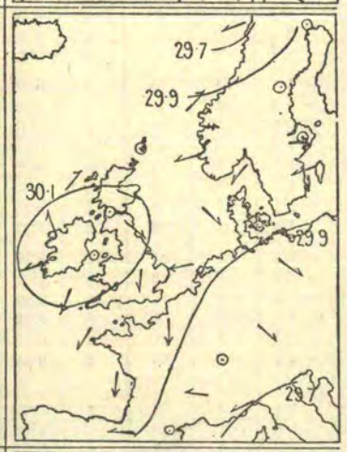
8 a.m.

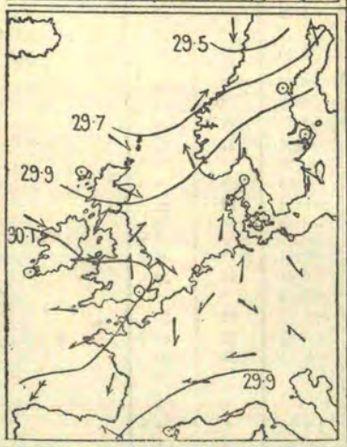


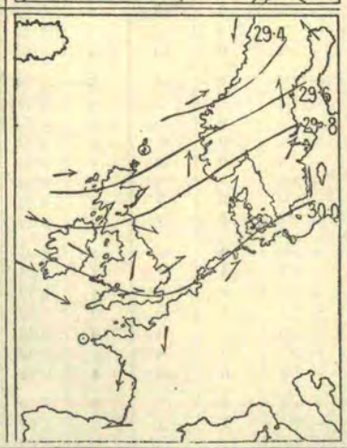
6 p.m.











Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, January 28.

Weather fine over the greater part of our Islands, but cloudy at many of the Scandinavian stations, with snow in several places. Snow showers falling later in the eastern parts of Great Britain.

Temperature fallen generally; readings over our Islands ranging at 8 a.m. from 40° at Valencia to 27° at Parsonstown. Sharp frost occurring in most places at night.

Wind South-Easterly in the west and south of Ireland and South-Westerly over the southern parts of France and Germany, but chiefly northerly elsewhere; strong in force at some of our south-eastern stations.

Sea rather rough in the east and south-east, but moderate to smooth elsewhere.

Barometer rising in Scandinavia, Denmark, and Great Britain, but falling in most other localities. Anticyclone lying over the west and north of our Islands, and depression of previous day moving southwards across Germany. Slight fall taking place over our Islands later.

Sunday, January 29.

Weather fair over the greater part of Western Europe, but snow reported at Dungeness, Cape Gris Nez, Paris, and Munich. Subsequently becoming dull and unsettled on our extreme north and north-west coasts.

Temperature changed little and irregularly in our Islands, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 41° at Scilly to 19° at Parsonstown. Hard frost occurring over England at night.

Wind light Southerly in the west of Ireland, but moderate Northerly and North-Easterly elsewhere. Subsequently backing to South-West in the north of Scotland.

Sea rough at some of the more exposed southern and eastern stations, but moderate to smooth elsewhere.

Barometer rising at all but our extreme southern and the French stations. Pressure highest over our western coasts, and lowest over Germany, but small shallow depression lying over Belgium. Slight fall taking place later over our extreme north and north-west coasts.

Monday, January 30.

Weather fair generally, but showers reported at some of our northern stations. Heavy snow and rain falling in the north of Scotland at night.

Temperature risen a little in the west and north of our Islands, but fallen elsewhere; readings over our Islands ranging from 40° at Malin Head to 18° at Loughborough and 17° at York. Brisk rise taking place over England later.

Wind light Westerly or South-Westerly over the northern parts of our Islands, and Southerly in the south of Norway, but Northerly or North-Easterly at our southern and the French stations. Strong North-Westerly gale in the Hebrides at night.

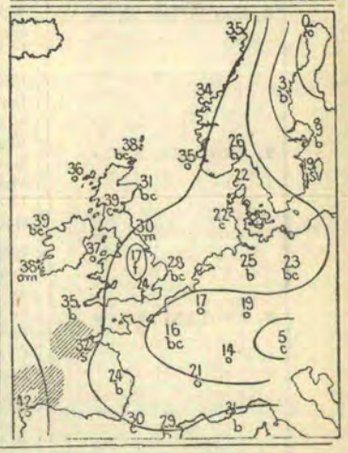
Sea moderate to smooth.

Barometer falling somewhat decidedly in the north, but rising elsewhere. Anticyclone lying over the south and south-west of our Islands, with a depression over the north of Scandinavia. Deep disturbance approaching the north of Scotland in evening.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°					Inches.	Inches.		
Week ending 23 January	York	—	—	—	—	—	—	—	—	—	—	—	1	2
„ 23 „	Llandudno	54	26	43·6	35·0	39·5	− 1·8	4	27	3	0·20	− 0·45	17	30

III.—DATA from which the SUMMARY on page 13 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	47	23	40·0	31·1	35·8	− 3·3	0	43	6	1·02	+0·20	*	*
	Stornoway	47	28	41·3	33·6	37·6	− 1·4	0	31	6	1·92	+0·76	8	15
	Wick	45	24	39·9	30·9	35·6	− 2·8	0	45	7	0·92	+0·44	*	*
	Lairg ℳ	41	23	36·6	28·0	32·5	− 4·5	0	67	5	1·44	+0·67	*	*
	Glencarron ℳ	48	19	39·3	30·9	35·3	− 1·6	0	47	6	3·82†	?	?	?
	Fort Augustus ℳ	51	18	41·4	28·6	35·3	− 2·7	0	47	7	2·15†	?	*	*
1. SCOTLAND, E.	Nairn	50	27	40·9	33·6	37·4	− 0·3	0	32	6	1·11	+0·68	*	*
	Aberdeen	50	25	41·3	33·1	37·4	0·0	0	32	7	0·72	+0·14	19	35
	Braemar ℳ	48	22	41·3	28·4	35·1	+ 1·2	0	48	5	0·61	−0·09	9‡	16‡
	Ochtertyre ℳ												*	*
	Leith	52	27	44·9	36·0	40·6	+ 2·5	8	24	5	0·72	+0·28	*	*
	Marchmont ℳ	51	26	41·3	33·0	37·3	+ 1·6	0	33	6	1·20	+0·55	18	32
2. ENGLAND, N.E.	Alnwick Castle	51	26	41·3	33·3	37·5	− 0·1	0	32	6	0·44	−0·08	*	*
	Durham	48	20	41·8	30·6	36·4	− 1·6	0	39	5	0·34	−0·13	14	24
	Shields	51	25	43·3	34·1	38·9	+ 0·5	4	30	5	0·37	−0·03	*	*
	Scarborough ℳ	48	22	40·9	32·0	36·6	− 1·4	0	38	5	0·68	+0·24	18‡	31‡
	York	49	14	42·6	31·6	37·3	− 0·9	2	38	4	0·23	−0·22	17	29
	Spurn Head	46	28	40·4	34·4	37·5	− 1·3	0	32	3	0·28	?	*	*
3. ENGLAND, E.	Hillington ℳ	46	10	39·5	26·7	33·4	− 4·0	0	60	4	0·52	+0·09	18	31
	Yarmouth	46	26	39·9	33·9	37·0	− 2·1	0	35	4	0·49	0·00	*	*
	Geldeston	47	16	41·3	30·9	36·3	− 2·7	0	40	3	0·54	+0·16	21	35
	Cambridge	49	22	42·0	31·0	36·7	− 1·5	0	37	3	0·12	−0·23	23	38
	Rothamsted	47	20	41·4	30·1	36·0	− 2·0	0	42	5	0·20	−0·41	*	*
	Ingatestone	46	24	40·7	33·1	37·1	− 1·2	0	34	4	0·11	−0·29	20‡	33‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	50	20	42·4	32·7	37·7	− 1·5	1	34	3	0·10	−0·32	15‡	25‡
	Loughborough	48	18	42·4	32·3	37·6	− 0·6	1	36	4	0·21	−0·28	*	*
	Leicester	48	20	41·5	31·7	36·8	− 0·8	0	36	5	0·25	−0·22	11	19
	Cheadle ℳ	49	25	40·3	31·3	36·0	− 1·2	0	42	4	0·54	−0·01	*	*
	Churchstoke ℳ	50	19	41·9	30·5	36·2	− 2·5	0	41	3	0·22	−0·45	15	25
	Hereford ℳ	53	18	44·1	30·9	37·8	− 1·4	6	42	3	0·05	−0·56	*	*
	Cirencester	48	16	42·1	30·7	36·6	− 2·1	0	41	3	0·10	−0·65	26	43
	Oxford	48	21	42·4	32·0	37·4	− 1·8	1	37	3	0·17	−0·34	20	33
5. ENGLAND, S.	London	47	24	42·1	34·0	38·2	− 1·1	0	29	2	0·05	−0·44	14‡	23‡
	Strathfield Turgiss ℳ	47	18	41·7	29·9	36·0	− 2·8	0	42	2	0·17	−0·42	*	*
	Dungeness	49	23	42·4	33·3	38·0	− 2·3	1	32	5	0·27	−0·31	*	*
	Hastings (St. Leonard's)	48	24	41·9	33·0	37·6	− 2·5	0	31	6	0·32	−0·29	20	33
	Southampton	50	22	43·8	31·1	37·7	− 1·4	5	41	4	0·10	−0·69	28	46
	Hurst Castle	47	21	42·3	30·3	36·5	− 4·4	1	43	2	0·11	−0·57	*	*
	Stowell ℳ												*‡	*‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	52	24	42·2	33·4	38·0	− 1·1	1	32	5	1·65†	−0·32	*	*
	Glasgow	49	21	42·8	31·1	37·1	− 1·5	2	40	4	1·11	+0·11	18	32
	Ardrossan	51	26	43·9	35·1	39·7	+ 0·3	5	27	6	0·59	−0·38	*	*
	Glenlee S	50	18	42·5	29·9	36·5	− 1·3	1	45	4	1·13	?	*	*
	Douglas (Isle of Man)	50	27	40·8	34·4	37·7	− 2·8	0	30	4	0·52	−0·56	22	37
7. ENGLAND, N.W.	Newton Reigny (Penrith)	49	21	41·0	30·9	36·2	− 1·3	0	41	6	1·02	+0·17	17	29
	Barrow-in-Furness	45	29	42·3	35·9	39·2	− 1·1	1	22	4	0·43	−0·41	*	*
	Stonyhurst	48	28	41·0	32·6	37·0	− 1·7	0	35	4	0·76	−0·19	17	29
	Blackpool ℳ	45	28	41·1	35·6	38·5	− 2·0	0	25	4	0·32	−0·34	17	29
	Manchester	48	27	41·0	32·5	36·9	− 2·3	0	36	4	0·44	−0·26	*	*
	Liverpool Obsy (Bidston)	50	31	42·9	37·0	40·1	− 0·1	3	19	4	0·32	−0·16	*	*
	Llandudno ℳ	51	30	44·1	36·6	40·5	− 1·2	6	21	3	0·25	−0·38	17	29
	Holyhead	47	33	43·6	39·1	41·5	− 1·1	4	12	3	0·12	−0·63	*	*
8. ENGLAND, S.W.	Llandovery	46	16	41·7	27·7	35·0	− 5·2	0	49	5	0·41	−0·81	*	*
	Pembroke	47	31	43·3	37·6	40·6	− 2·0	4	17	4	0·24	−0·61	23	38
	Arlington (N. Devon)	45	19	41·7	31·0	36·6	− 3·7	0	38	4	0·70	−0·33	*	*
	Cullompton ℳ	48	17	42·4	28·6	35·8	− 5·4	1	49	3	0·22	−0·58	22	36
	Falmouth	48	27	44·0	35·9	40·1	− 3·3	6	24	4	0·45	−0·83	26	42
	Plymouth	48	24	43·7	33·2	38·7	− 4·2	5	34	4	0·16	−0·74	25	40
	Prawle Point	48	24	44·7	34·4	39·8	− 2·7	8	30	4	0·24	?	*	*
9. IRELAND, N.	Malin Head	50	30	44·1	37·7	41·0	+ 0·8	6	17	6	1·70	?	*	*
	Londonderry	51	26	44·5	35·0	39·9	− 1·1	7	27	5	1·14	+0·26	*	*
	Mullaghmore	54	26	46·4	37·0	41·9	− 0·1	12	22	6	0·63	−0·20	*	*
	Belmullet	50	27	44·9	38·0	41·6	− 2·7	8	17	6	0·68	?	*	*
	Markree Castle	52	17	44·6	33·3	39·2	− 2·5	7	34	6	0·66	−0·09	25	42
	Brookeborough	51	16	45·6	30·1	38·2	− 1·9	10	47	5	0·43	?	*	*
	Armagh	54	22	46·2	31·1	39·0	− 1·0	12	44	3	0·26	−0·40	23	39
	Donaghadee	53	30	45·0	37·1	41·2	+ 0·6	8	20	5	0·23	−0·45	*	*
	Edgeworthstown	50	20	42·3	32·9	37·8	− 1·8	1	33	3	0·31	?	*	*
10. IRELAND, S.	Dublin	54	26	44·7	34·6	39·9	− 1·1	8	30	2	0·05	−0·45	25	42
	Parsonstown	53	18	44·4	30·6	37·8	− 2·4	7	44	3	0·19	−0·50	20	34
	Kilkenny	52	21	44·9	31·7	38·6	− 1·3	8	40	2	0·06	−0·74	*	*
	Waterford	?	22	?	32·6	?	?	?	?	?3	?0·05	−?1·05	*	*
	Roche's Point	50	30	45·3	38·6	42·1	− 1·0	15	10	2	0·31	−0·97	*	*
	Valencia	52	31	47·9	40·3	44·3	− 0·9	23	5	4	0·21	−1·23	15	25
	Killarney	54	23	47·5	36·4	42·2	− 1·1	25	16	3	0·23	?	*	*
	Foynes	56	30	46·7	37·4	42·2	+ 0·9	21	13	4	0·25	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	49	33	45·6	39·9	42·9	− 3·2	15	6	4	0·29	−0·53	*	*
	Jersey (Noirmont)	49	30	44·6	35·9	40·5	− 2·0	7	25	4	0·24	−0·46	26	41

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

NOTE.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 5.] *Second Series.* WEEK ENDING MONDAY, 6TH FEBRUARY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 20.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	51	20	44·4	33·8	39·1	1 above.	7	0	30	0	39	+11	146	−24
	1. SCOTLAND, EAST	54	23	45·0	34·4	39·7	3 above.	8	− 1	29	− 8	44	+14	143	−71
	2. ENGLAND, N.E.	53	17	44·7	35·1	39·9	1 above.	8	− 1	26	− 6	33	+ 5	135	−67
	3. ENGLAND, EAST	51	10	42·3	29·6	36·0	3 below.	1	−11	44	+11	27	− 7	181	−39
	4. MIDLAND COUNTIES	54	14	44·2	31·9	38·1	1 below.	6	− 6	37	+ 4	35	− 8	186	−33
	5. ENGLAND, SOUTH	54	11	44·1	30·1	37·1	3 below.	6	− 7	43	+17	32 *	−13	174 *	− 3
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	54	27	46·3	37·9	42·2	3 above.	19	+ 9	11	−13	51	+12	93	−70
	7. ENGLAND, N.W.	51	26	43·8	37·2	40·5	0 (average).	5	− 5	18	− 6	29	− 9	114	−57
	8. ENGLAND, S.W.	52	13	45·2	34·1	39·7	3 below.	9	−11	30	+18	48	−29	128	+21
	9. IRELAND NORTH	53	29	46·6	39·2	42·9	2 above.	18	+ 4	8	−15	76	+18	77	−66
	10. IRELAND, SOUTH	53	25	47·1	37·9	42·5	0 (average).	21	− 1	11	− 3	97 *	+ 3	57 *	−46
	— CHANNEL ISLANDS	50	28	46·0	37·5	41·8	2 below.	11	−12	19	+13	81	−16	57	− 1

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 20.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	6	12	1 more.	24	0	4·7	−1·1	4	7	29	− 6	11	− 3
	1. SCOTLAND, EAST	4	3	3 less.	18	+2	2·5	−0·6	7	12	55	− 5	21	− 2
	2. ENGLAND, N.E.	3	2	2 less.	14	−3	1·0	−1·3	7	12	38	+ 3	14	+ 1
	3. ENGLAND, EAST	3	2	3 less.	13	−5	0·9	−1·6	11	17	66	+12	23	+ 4
	4. MIDLAND COUNTIES	2	1	4 less.	12	−4	0·6	−2·3	13	21	56	+13	19	+ 4
	5. ENGLAND, SOUTH	2	3	4 less.	11	−5	1·0	−2·2	11	17	56 *	+12	19	+ 4
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	4	6	7 less.	18	−2	4·5	−1·3	10	16	41	+ 6	15	+ 2
	7. ENGLAND, N.W.	4	3	4 less.	16	−2	1·6	−2·2	6	10	39	− 1	14	0
	8. ENGLAND, S.W.	3	3	7 less.	17	−2	2·0	−3·1	16	24	62	+ 7	21	+ 2
	9. IRELAND, NORTH	4	3	4 less.	17	−5	2·8	−1·0	6	9	48	− 4	17	− 2
	10. IRELAND, SOUTH	3	2	7 less.	13	−8	3·0	−1·8	6	9	62	− 1	22	0
	— CHANNEL ISLANDS	4	3	5 less.	21	+1	1·8	−2·2	11	17	86	+10	28	+ 3

General Remarks.

Weather was dull and cold generally during the earlier part of the period, with some falls of cold rain, sleet, and snow, but as the week progressed the air became very mild and humid. Although the sky continued cloudy or overcast very little rain fell in any district except the extreme north of Scotland, where a heavy fall was experienced on the 4th.

Temperature was low in most districts during the first three days of the week, especially over England, but subsequently rose rapidly and continued very high and uniform. The average for the week has not differed materially from the normal; in Scotland and the greater part of Ireland an excess of 1° to 3° is shown, and in most parts of England a deficit of 1° to 3°. The highest of the maxima, which were recorded either on the 5th or 6th, varied from 50° in the "Channel Islands" to 54° in "Scotland, E.", "Scotland, W.", the "Midland Counties", and "England, S." The lowest of the minima were registered in most places on the 2nd, when the thermometer fell to 10° at Hillington and Geldeston, to 11° at Stowell, and to between 13° and 17° in most of the other English districts. In Scotland, Ireland, and the north-west of England the readings were higher, ranging from 20° to 29°.

Rainfall has been more than the mean in "Scotland, N.", but less in all other districts.

Bright sunshine has been very deficient, the percentage of the possible amount of duration ranging from 7 in "Scotland, N." to 21 in the "Midland Counties", and to 24 in "England, S.W."

Depressions observed.—As the period commenced a rather deep depression which had advanced from the north-north-westward was travelling southwards over Great Britain, producing strong Northerly gales over all our more western and north-western coasts, and strong winds or slight gales (at first from South-East and afterwards from East-North-East) over the east and south-east of England. This disturbance finally disappeared over Spain, the distribution of pressure over France and the south of our Islands became anticyclonic, and the only other depressions which arrived in our area travelled eastwards off our extreme northern coasts. Under these conditions moderate to fresh breezes, ranging between South-West and West or North-West became general over our Islands and their neighbourhood.

* This value has been altered owing to the receipt of further information.

ERRATUM.—In the ninth line of the "General Remarks" for last week the name "Geldeston" was quoted in error instead of "Hillington."

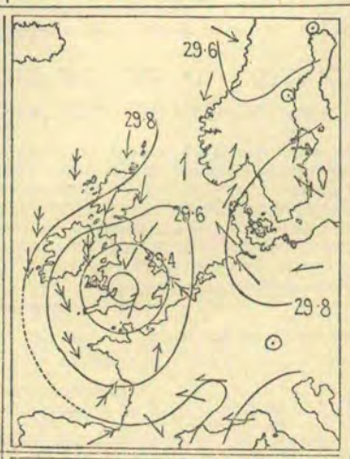
A 53247. 350.—2/88. Wt. 36. E. & S.

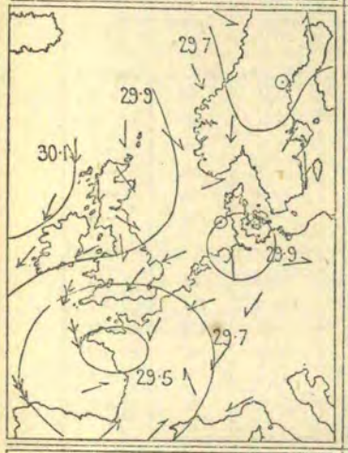
II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

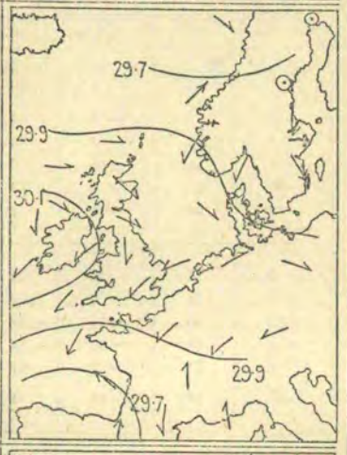
Synoptic Charts.

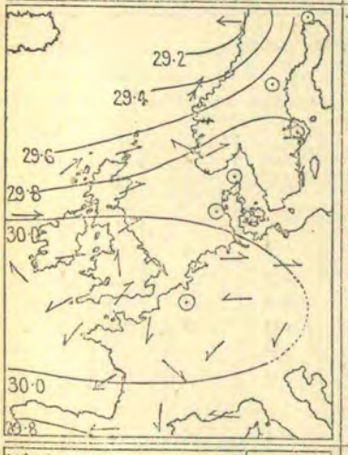
PRESSURE AND WIND.

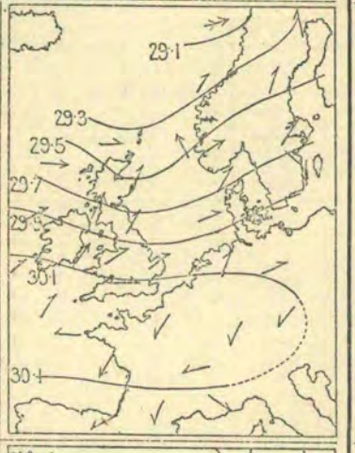
8 a.m. | **6 p.m.**

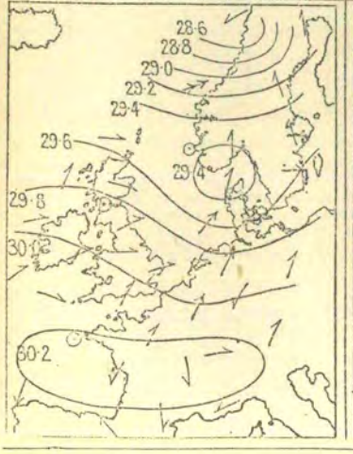


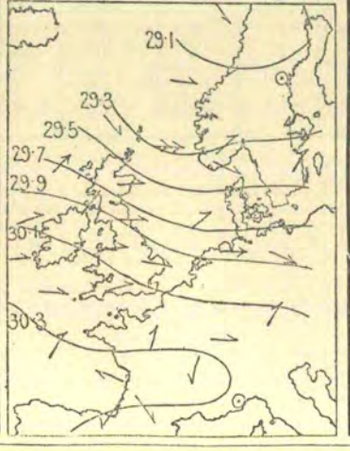












Weather

During the 24 hours succeeding

8 a.m. on the dates given.

Tuesday, January 31.

Weather cloudy and unsettled generally, with rain, snow, or hail in many places.

Temperature fallen a little in the extreme north, but risen elsewhere; readings over our Islands ranging at 8 a.m. from 45° at Scilly to 30° at Aberdeen. Frost occurring over Great Britain at night.

Wind strong to a gale from the North-Westward or Northward on our western coasts, but fresh South-Westerly in the south and east, and Southerly or South-Easterly on the eastern shores of the North Sea. Subsequently increasing to fresh gale from South-East in the east of England.

Sea high or rough on all but our east coasts.

Barometer rising in the extreme north, but falling elsewhere. Pressure highest in Spain, with a deep depression over our north-east coasts, and a shallower system over the north of Scandinavia. Former disturbance subsequently moving southwards, and barometer rising at all our more northern stations.

Wednesday, February 1.

Weather dull and unsettled over the Channel and France, with rain or sleet in many places, but fair in most other localities. Snow falling later in the Shetlands and Hebrides.

Temperature risen quickly in the south of France, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 40° at Valencia and Scilly to 27° at Cambridge. Frost occurring generally at night, especially over England, where sheltered thermometer in many places fell below 20°.

Wind moderate Northerly in the north and strong North-Easterly in the south of our Islands, but South-Westerly in the south of France. Subsequently backing to West in the north of Scotland.

Sea high or rough on all our south and south-east coasts.

Barometer rising at all but the southern French stations. Pressure highest off our north-west coasts, but relatively high over the south of Denmark; deep depression of previous day now passing away over the west of France and the Bay of Biscay. Slight fall taking place in north later.

Thursday, February 2.

Weather varying greatly in different localities, but fair generally. Snow falling in Norway and North Germany, and rain in the north of Ireland. Rain falling later at all our western and northern stations, and snow in many parts of England.

Temperature risen several degrees in the north, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 48° at Stornoway and Belmullet to 20° in London. Brisk rise taking place over England later.

Wind moderate to strong from South-West in the north, but North-Easterly at our extreme southern and the French stations. Subsequently shifting to the Westward in the south.

Sea moderate to smooth generally.

Barometer rising at all but the Norwegian and Scotch stations. Anticyclonic band lying over the south of our Islands and north of France, with a rather deep depression off the north-west of Norway. Subsidiary disturbance subsequently appearing near the Shetlands, and barometer falling in all parts of our Islands.

Friday, February 3.

Weather fine in the south of France, but cloudy or overcast elsewhere, with rain in the Shetlands and west of Norway. Slight rain falling later at several of our western and northern stations.

Temperature risen several degrees at all but the Central French stations; readings over our Islands ranging at 8 a.m. from 49° at Valencia to 35° at Yarmouth.

Wind Westerly or South-Westerly over our Islands and the North Sea, but Southerly in Sweden and North-Easterly in the South of France; light or moderate in force generally.

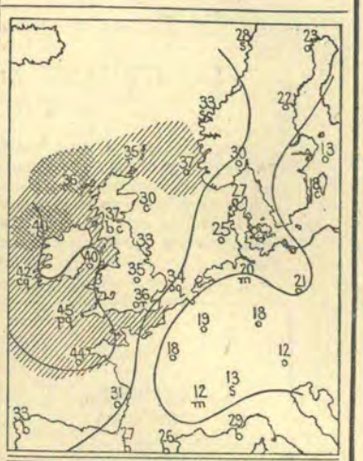
Sea rather rough at Christiansund and Cape Gris Nez, but moderate to smooth elsewhere.

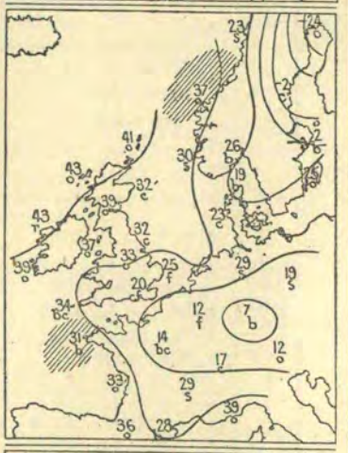
Barometer falling in Scandinavia, Denmark, and the south of our Islands, but rising elsewhere. Anticyclone lying over France, with a deep depression over the north of Norway, and a well defined secondary disturbance over the Skager Rack. Depression subsequently moving away in an easterly direction.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

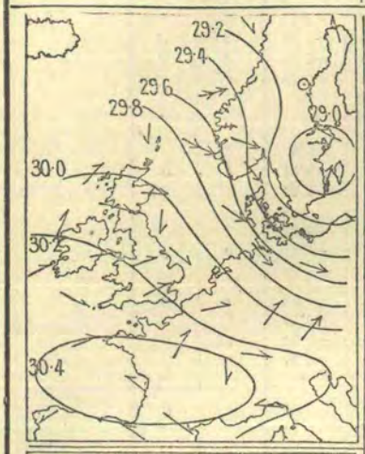
Weather

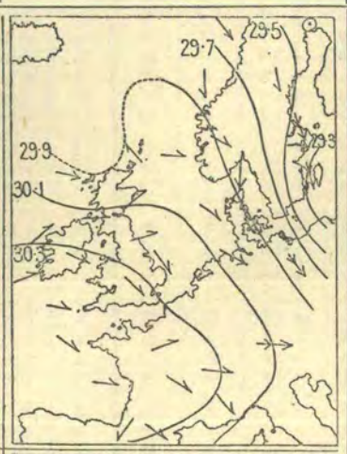
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Saturday, Februuary 4.

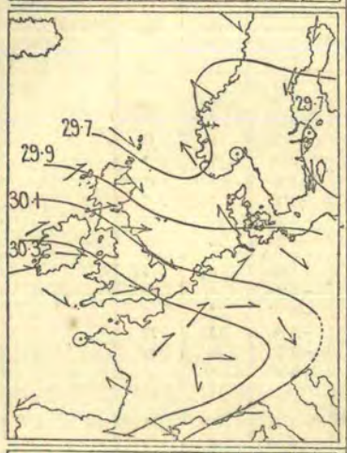
Weather fine in Spain and the south of France, but cloudy elsewhere, with snow in Sweden and rain at some of our north-western stations. Slight rain falling later in many parts of our Islands.

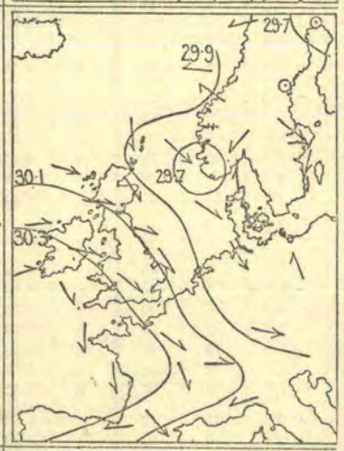
Temperature fallen several degrees in the extreme north of our Islands, but risen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 48° at Valencia to 31° at Sumburgh Head.

Wind light Westerly in our Islands and the north of France, but strong to a gale from North-West over the eastern shores of the North Sea and light Easterly in the south of France.

Sea slight or smooth except off the Norwegian coasts.

Barometer rising at all but the Swedish and German stations. Anticyclone lying over France and the Bay of Biscay, with deep depression off the south-east of Sweden. Depression subsequently moving eastwards, but shallow disturbance appearing off the north of Scotland.





Sunday, February 5.

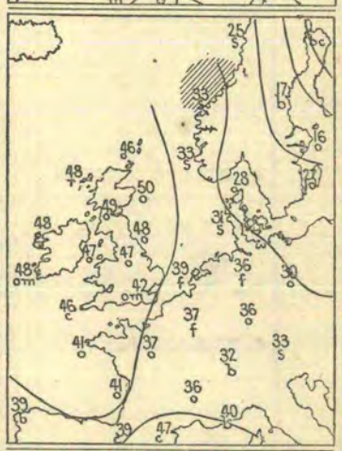
Weather fine in the east of England and south of France, but cloudy or overcast elsewhere, with fog over the Netherlands and snow in Norway. Slight rain falling later at some of our western and northern stations.

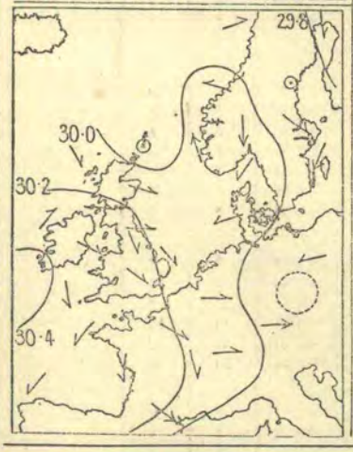
Temperature risen several degrees in the north, but changed irregularly elsewhere; readings over our Islands ranging at 8 a.m. from 50° at Nairn and Aberdeen to 41° at Oxford. Subsequently rising above 50° in many parts of Great Britain.

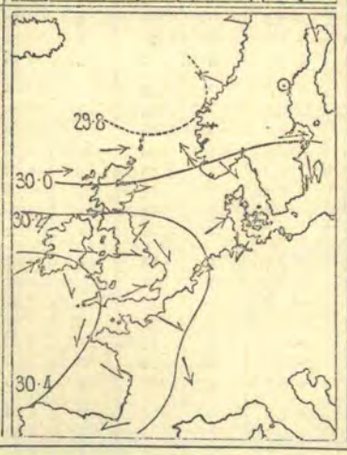
Wind light to fresh from the Westward in our Islands, but South-Easterly on the eastern shores of the North Sea and Easterly in the south of France. Subsequently veering to the North-Westward on our south and south-east coasts.

Sea moderate to smooth generally.

Barometer rising in Sweden, Denmark, and Germany, but falling elsewhere. Anticyclone lying over France, the Bay of Biscay, and our extreme south-west coasts, with a shallow depression off the west of Norway. Depression subsequently moving south-eastwards, and barometer rising again in the north.







Monday, February 6.

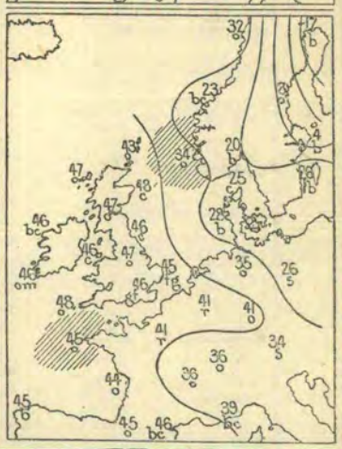
Weather fair in many parts of our Islands, Scandinavia, and Denmark, but cloudy elsewhere, with snow in Germany. Rain falling later in the extreme north of Scotland.

Temperature fallen a little at all but the French stations; readings over our Islands ranging at 8 a.m. from 48° at Nairn, Aberdeen, Scilly, and Jersey to 38° at Hurst Castle. Subsequently rising above 50° in many parts of Great Britain.

Wind moderate South-Westerly on our north-west coasts, but light North-Westerly in the south and east, and Northerly in France.

Sea rather rough at Skudesnaes and Brest, but moderate to smooth elsewhere.

Barometer rising at all but the French and Spanish stations. Anticyclone lying off our extreme south-west coasts, with a shallow depression over Germany, and another off the west of Germany. Deeper disturbance appearing off the north of Scotland later, and barometer falling decidedly in north.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°	°	Inches.	Inches.		
Week ending 30 January -	Stowell - - - - ‡‡	45	19	40·8	30·3	35·8	− 4·5	0	43	5	0·21	?	17	23
„ 30 „ -	Waterford - - - -	49	22	44·0	32·6	38·5	− 3·5	6	36	4	0·08	− 1·02	*	*

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ℳ	47	26	43·4	31·1	37·3	− 1·7	4	39	7	1·54	+0·71	*	*
	Stornoway	50	28	46·3	35·4	40·9	+ 1·9	12	26	6	0·73	−0·37	4	7
	Wick	50	26	44·9	33·6	39·3	+ 0·8	8	32	6	0·49	+0·01	*	*
	Lairg ℳ	51	20	43·1	34·1	38·6	+ 1·6	3	28	6	0·75	−0·04	*	*
	Glencarron ℳ	48	20	43·4	35·1	39·3	+ 2·2	4	25	7	3·35†	?	?	?
	Fort Augustus ℳ	51	23	45·2	33·6	39·4	+ 1·1	9	32	5	0·37†	?	*	*
1. SCOTLAND, E.	Nairn	52	28	46·6	35·0	40·8	+ 2·8	13	28	4	0·15	−0·25	*	*
	Aberdeen	54	28	45·1	33·7	39·4	+ 1·6	9	31	6	0·29	−0·31	8	14
	Braemar ℳ	50	23	43·2	33·3	38·3	+ 4·4	3	32	2	0·57	−0·20	5‡	8‡
	Ochtertyre ℳ												*	*
	Leith	52	30	46·6	36·4	41·5	+ 3·2	13	23	2	0·22	−0·22	*	*
	Marchmont ℳ	50	26	43·6	33·6	38·6	+ 2·6	4	31	4	0·27	−0·38	9	15
2. ENGLAND, N.E.	Alnwick Castle	52	30	45·7	37·6	41·7	+ 3·7	10	18	3	0·18	−0·39	*	*
	Durham	51	27	44·3	35·8	40·1	+ 1·7	6	24	3	0·23	−0·23	4	7
	Shields	51	28	45·7	34·9	40·3	+ 1·5	10	27	4	0·60	+0·20	*	*
	Scarborough ℳ	52	27	43·5	35·1	39·3	+ 1·1	4	25	2	0·10	−0·34	9‡	15‡
	York	53	17	47·1	32·6	39·9	+ 1·3	14	37	3	0·28	−0·18	9	15
	Spurn Head	46	30	41·7	34·4	38·1	− 0·9	0	27	1	0·03	?	*	*
3. ENGLAND, E.	Hillington ℳ	48	10	41·0	27·7	34·4	− 3·7	0	53	3	0·13	−0·32	12	19
	Yarmouth	48	20	40·9	29·9	35·4	− 4·1	0	46	4	0·10	−0·40	*	*
	Geldeston	49	10	40·6	28·9	34·8	− 4·9	0	50	4	0·42	+0·03	7	11
	Cambridge	51	16	44·7	28·6	36·7	− 2·3	8	49	2	0·08	−0·30	14	22
	Rothamsted	51	15	44·2	30·6	37·4	− 1·3	6	41	2	0·12	−0·48	*	*
	Ingatestone	49	20	42·6	32·1	37·4	− 1·5	2	35	2	0·14	−0·26	10‡	16‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	52	26	45·6	33·7	39·7	+ 0·2	10	32	1	0·11	−0·31	12‡	23‡
	Loughborough	51	18	45·0	31·7	38·4	− 0·4	8	39	2	0·17	−0·32	*	*
	Leicester	51	24	43·6	33·2	38·4	+ 0·2	4	32	2	0·35	−0·14	8	13
	Cheadle ℳ	48	23	40·8	33·1	37·0	− 1·1	0	35	4	0·25	−0·43	*	*
	Churchstoke ℳ	49	23	43·5	34·8	39·2	− 0·5	4	27	2	0·10	−0·60	8	13
	Hereford ℳ	54	20	46·6	31·2	38·9	− 1·1	13	41	2	0·04	−0·57	*	*
	Cirencester	51	14	43·9	27·6	35·8	− 3·4	5	52	1	0·07	−0·66	20	32
	Oxford	51	19	44·6	29·7	37·2	− 2·6	7	45	3	0·08	−0·58	15	24
5. ENGLAND, S.	London	52	20	44·3	30·3	37·3	− 2·7	6	43	2	0·24	−0·24	6‡	9‡
	Strathfield Turgiss ℳ	53	12	44·4	28·2	36·3	− 3·5	7	50	2	0·06	−0·52	*	*
	Dungeness	51	21	43·9	29·4	36·7	− 4·0	5	46	2	0·34	−0·21	*	*
	Hastings (St. Leonard's)	50	23	43·2	32·7	38·0	− 2·7	3	34	3	0·54	−0·05	11	17
	Southampton	54	20	45·6	33·2	39·4	− 0·6	10	33	2	0·03	−0·73	16	25
	Hurst Castle	53	20	44·7	29·0	36·9	− 4·7	8	48	3	0·08	−0·59	*	*
	Stowell ℳ	51	11	42·7	27·6	35·2	− 5·3	2	51	3	0·51	?	11‡	17‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	54	29	47·4	39·5	43·5	+ 4·1	21	7	5	1·82†	−0·24	*	*
	Glasgow	50	27	45·4	35·4	40·4	+ 1·7	10	25	5	0·22	−0·76	4	7
	Ardrossan	50	29	46·3	37·9	42·1	+ 2·7	18	11	3	0·36	−0·54	*	*
	Glenlee ℒ	51	28	46·3	37·4	41·9	+ 4·1	12	19	6	0·31	?	*	*
	Douglas (Isle of Man)	51	31	46·2	39·5	42·9	+ 2·2	17	7	3	0·26	−0·76	15	24
7. ENGLAND, N.W.	Newton Reigny (Penrith)	51	26	45·0	34·9	40·0	+ 2·1	8	27	3	0·15	−0·69	9	15
	Barrow-in-Furness	46	32	44·0	37·3	40·7	0·0	6	18	4	0·33	−0·43	*	*
	Stonyhurst	48	29	42·5	35·7	39·1	− 0·1	1	22	5	0·70	−0·26	5	8
	Blackpool ℳ	44	32	41·9	36·6	39·3	− 1·6	0	19	4	0·33	−0·32	5	8
	Manchester	49	29	42·3	36·7	39·5	0·0	1	19	5	0·52	−0·14	*	*
	Liverpool Obsy (Bidston)	47	32	43·6	37·3	40·5	− 0·2	4	18	4	0·30	−0·18	*	*
	Llandudno ℳ	48	31	44·4	38·9	41·7	− 0·3	7	13	4	0·09	−0·53	5	8
	Holyhead	49	35	46·3	40·0	43·2	+ 0·3	17	6	3	0·22	−0·52	*	*
8. ENGLAND, S.W.	Llandovery	50	20	45·1	33·3	39·2	− 1·6	9	33	4	0·51	−0·68	*	*
	Pembroke	48	32	45·0	39·3	42·2	− 0·8	13	8	4	0·31	−0·52	9	14
	Arlington (N. Devon)	48	21	43·3	31·7	37·5	− 3·2	4	37	3	0·53	−0·61	*	*
	Cullompton ℳ	52	13	45·5	30·8	38·2	− 3·3	10	42	2	0·05	−0·77	14	22
	Falmouth	52	26	45·3	36·8	41·1	− 2·5	9	21	1	0·20	−1·04	21	32
	Plymouth	52	25	45·9	33·5	39·7	− 3·3	11	32	3	0·13	−0·76	19	29
	Prawle Point	52	23	46·4	33·0	39·7	− 3·0	12	35	4	0·20	?	*	*
9. IRELAND, N.	Malin Head	48	29	45·7	38·9	42·3	+ 2·1	15	9	4	0·26	?	*	*
	Londonderry	51	32	46·9	39·5	43·2	+ 2·6	19	7	5	0·34	−0·50	*	*
	Mullaghmore	51	34	46·4	39·9	43·2	+ 1·7	17	6	6	0·49	−0·36	*	*
	Belmullet	50	36	47·1	41·3	44·2	+ 0·2	18	2	6	0·76	?	*	*
	Markree Castle	51	32	47·4	39·5	43·5	+ 2·5	21	7	5	0·42	−0·31	6	10
	Brookeborough	52	32	46·3	38·5	42·4	+ 2·5	18	10	4	0·27	?	*	*
	Armagh	53	30	47·2	38·4	42·8	+ 2·8	21	10	4	0·14	−0·52	5	8
	Donaghadee	52	31	46·9	38·0	42·5	+ 1·9	20	11	2	0·04	−0·64	*	*
	Edgeworthstown	49	33	45·6	38·7	42·2	+ 2·5	15	9	4	0·37	−0·38§	*	*
10. IRELAND, S.	Dublin	51	31	46·8	39·7	43·3	+ 2·1	19	6	4	0·22	−0·33	1	2
	Parsonstown	52	30	46·6	36·4	41·5	+ 1·3	13	23	4	0·25	−0·41	6	10
	Kilkenny	51	27	46·3	36·1	41·2	+ 1·0	12	24	4	0·28	−0·50	*	*
	Waterford	52	27	47·6	35·6	41·6	− 0·9	16	26	3	0·29	−0·79	*	*
	Roche's Point	52	32	47·1	37·7	42·4	− 1·1	21	12	1	0·10	−1·18	*	*
	Valencia	51	33	48·4	40·7	44·6	− 0·7	24	4	5	0·45	−0·91	10	16
	Killarney	53	25	47·9	35·6	41·8	− 1·7	17	27	3	0·08	?	*	*
	Foynes	50	32	46·0	41·5	43·8	+ 2·5	15	1	3	0·16	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	49	32	46·6	38·9	42·8	− 3·2	19	9	4	0·12	−0·67	*	*
	Jersey (Noirmont)	50	28	45·4	36·1	40·8	− 1·3	10	23	3	0·40	−0·29	11	17

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ℒ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

§ The corresponding value for last week should be "−0·27."

Note.—The Sunshine Recorder at Glencarron is out of order.

(OFFICIAL COPY.)

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 6.] *Second Series.* WEEK ENDING MONDAY, 13TH FEBRUARY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 24.)	Observed during the Week.					Above or below the Mean for the Week.	Accumulated.							
								For the Week.				From January 3, 1888.			
		Highest.	Lowest.	Averages of Daily Maxima.	Averages of Daily Minima.	Averages of Daily Mean.		Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	48	13	39·1	28·7	34·0	5 below.	0	− 8	56	+28	39	+ 3	202	+ 8
	1. SCOTLAND, EAST	52	12	41·4	30·6	36·0	1 below.	0	−11	42	+ 9	44	+ 5	185	−57
	2. ENGLAND, N.E.	54	20	43·0	33·8	38·4	1 below.	3	− 8	29	+ 1	36	− 1	164	−65
	3. ENGLAND, EAST *	53	23	44·6	34·2	39·4	0 (average).	7	− 7	29	+ 1	34	−10	210	−37
	4. MIDLAND COUNTIES	52	21	44·7	35·1	39·9	0 (average).	8	− 7	26	− 1	43	−11	212	−31
	5. ENGLAND, SOUTH	53	29	45·7	36·1	40·9	0 (average).	10	− 6	23	+ 2	42	−18	197	+ 3
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	47	8	42·5	32·6	37·6	2 below.	1	−11	34	+12	52	0	130	−53
	7. ENGLAND, N.W.	48	11	42·3	35·5	38·9	2 below.	1	−11	23	+ 1	30	−19	137	−54
	8. ENGLAND, S.W.	53	25	45·5	37·6	41·6	1 below.	10	−11	18	+ 7	58	−41	146	+32
	9. IRELAND NORTH	50	18	42·5	34·7	38·6	2 below.	1	−15	26	+ 6	77	+ 3	103	−58
	10. IRELAND, SOUTH	51	21	44·7	37·1	40·9	2 below.	8	−15	19	+ 7	105	−15	76	−34
	— CHANNEL ISLANDS	50	36	47·8	42·1	45·0	1 above.	21	− 4	0	− 4	102	−18	57	− 4

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 24.)	Rainfall. For the Week.			Rainfall. From January 3, 1888.				Bright Sunshine. For the Week.		Bright Sunshine. From January 3, 1888.			
		Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Hours recorded.	Percentage of possible Duration.	Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	6	10	1 more.	30	+1	5·7	−1·1	16	26	45	+ 2	14	0
	1. SCOTLAND, EAST	3	3	3 less.	21	+1	2·8	−0·9	28	45	83	+11	25	+ 2
	2. ENGLAND, N.E.	3	2	3 less.	17	−4	1·2	−1·6	33	52	71	+29	21	+ 9
	3. ENGLAND, EAST *	4	5	0 (average).	17	−5	1·4	−1·6	24	31	90	+23	25	+ 6
	4. MIDLAND COUNTIES	4	5	1 less.	16	−5	1·1	−2·4	20	31	76	+20	21	+ 5
	5. ENGLAND, SOUTH	5	8	2 more.	16	−5	1·8	−1·9	10	15	66	+ 9	18	+ 2
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	5	6	5 less.	23	−3	5·1	−1·8	24	37	65	+17	19	+ 5
	7. ENGLAND, N.W.	6	4	3 less.	22	−1	2·0	−2·5	22	34	61	+11	18	+ 3
	8. ENGLAND, S.W.	5	7	4 less.	22	−2	2·7	−3·4	14	21	76	+ 7	21	+ 2
	9. IRELAND, NORTH	5	6	1 less.	22	−5	3·4	−1·1	12	18	60	− 8	17	− 3
	10. IRELAND, SOUTH	4	4	5 less.	17	−9	3·4	−2·3	17	25	79	0	22	− 1
	— CHANNEL ISLANDS	6	9	1 more.	27	+1	2·7	−2·0	9	13	95	− 1	25	− 1

General Remarks.

Weather was fair and mild generally during the earlier part of the period, but subsequently became cold and unsettled in all parts of the Kingdom, with heavy falls of sleet and snow.

Temperature has on the whole not differed much from the mean except in "Scotland, N.", where it has been 5° below. The highest of the maxima, which were registered either on the 7th or 8th, ranged from 47° in "Scotland, W." to 54° in "England, N.E." The lowest of the minima were recorded in most places on the 12th, when the thermometer fell to 8° at Glenlee, 11° at Newton Reigny, 12° at Braemar, and 13° at Lairg. In other localities the readings were higher, ranging from 18° in "Ireland, N." to 29° in "England, S." and to 36° in the "Channel Islands".

Rainfall has been a little more than the mean in "Scotland, N.", "England, S.", and the "Channel Islands", and equal to it in "England, E.", but rather less in all other districts.

Bright sunshine has been more prevalent generally than for some weeks past, the percentage of the possible amount of duration ranging from 26 to 45 in Scotland, from 18 to 25 in Ireland, and from 15 to 52 over England. In the "Channel Islands", however, only 13 % was recorded.

Depressions observed.—During the greater part of this period the only depressions in the neighbourhood of our Islands moved in a south-easterly direction across the northern parts of the North Sea and over Norway and Denmark, and as the barometer was highest off our south-western coasts, moderate to fresh winds from the North-Westward were very general. Towards the end of the period, however, some small but well-defined disturbances appeared in different parts of the Kingdom, and the winds on our coasts became very variable in direction. The depression which most influenced the character of the weather over England travelled from the south of Ireland to our extreme south-eastern coasts on the evening and night of the 13th, causing during its progress much snow and sleet over all our more southern districts.

* The values in this district are liable to alteration owing to the non-arrival of the Return from Ingatestone.

A 53320. 350.—2/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

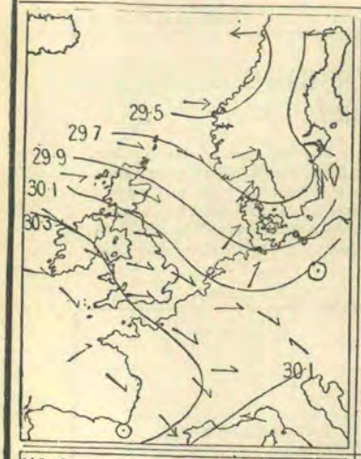
Weather

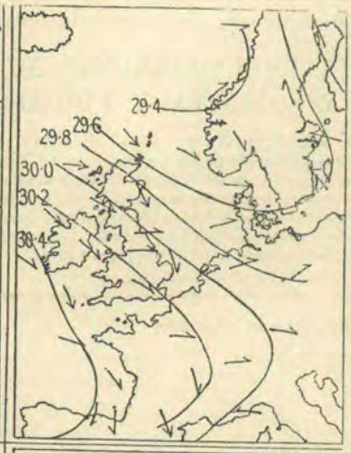
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, February 7.

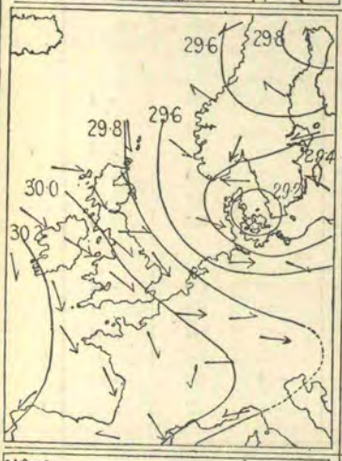
Weather fair over the greater part of our Islands and Scandinavia, but dull elsewhere, with fog and rain locally. Slight rain falling later in many parts of the United Kingdom.

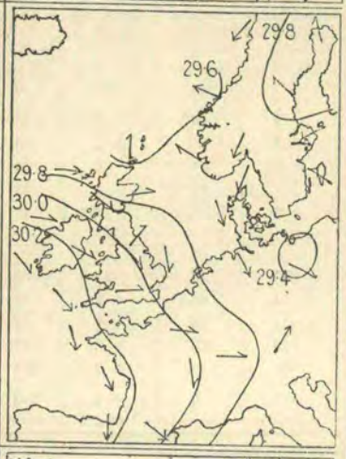
Temperature fallen several degrees in the north, but risen elsewhere; readings over our Islands ranging from 50° at Valencia to 40° at Sumburgh Head, Wick, and Aberdeen. Subsequently rising above 50° in the southern parts of England and Ireland.

Wind moderate Westerly or North-Westerly over our Islands and France, but South-Westerly in Denmark and light Southerly in the south of Sweden. Subsequently increasing to a slight gale in the extreme north of Scotland.

Sea rather rough at Scilly, but moderate to smooth elsewhere.

Barometer falling at all but our extreme western and the French stations. Anticyclone lying to the south-westward of our Islands, with a large depression off the north west of Norway, and secondary disturbances over the south of Scandinavia. Fall taking place generally later.





Wednesday, February 8.

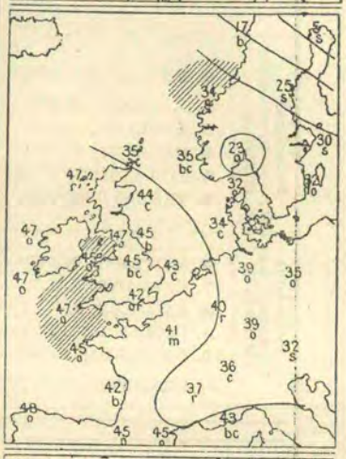
Weather fine in the east of England, but cloudy or overcast elsewhere, with snow in Sweden, rain in the south of England, and showers on our extreme north-west coasts. A little rain falling later in most parts of the United Kingdom.

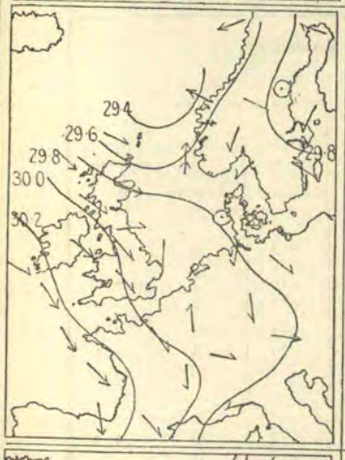
Temperature risen several degrees in Sweden and slightly in the north of our Islands, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 47° at several of our western stations to 35° in the Shetlands.

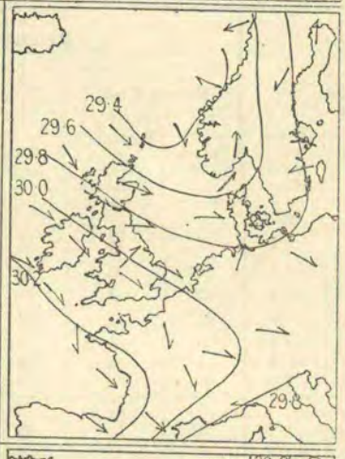
Wind moderate to strong from the North-Westward over our Islands and France, but Westerly in Germany and Easterly in the south of Sweden and north of Denmark. Subsequently backing to West or South-West on our northern coasts.

Sea rather rough at the mouth of the Channel as well as at Christiansund and Holyhead.

Barometer falling at all but the northern Scandinavian stations. Anticyclone lying to the south-westward of our Islands, with well-defined depression over the Kattegatt. Depression subsequently moving away to Germany, but new disturbance appearing off our extreme northern coasts.







Thursday, February 9.

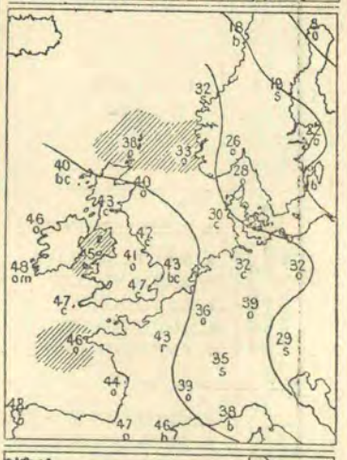
Weather fair over the greater part of England, but cloudy or overcast elsewhere, with snow at some of the Scandinavian stations, as well as in South Germany. Snow falling later in the north of Scotland, and rain in many other parts of the Kingdom.

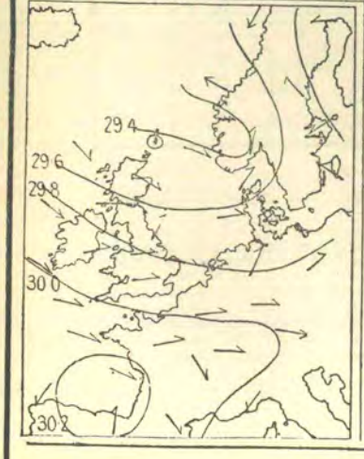
Temperature fallen at all but our southern and the French stations; readings over our Islands ranging at 8 a.m. from 48° in the south of Ireland to 38° in the Shetlands.

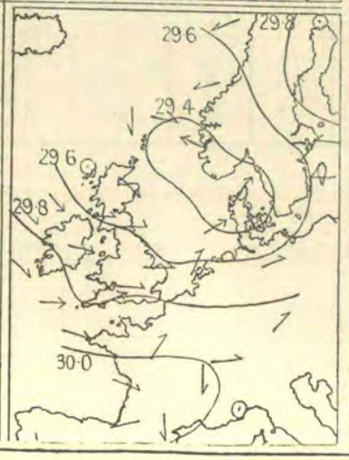
Wind light to fresh from the North-Westward over our Islands and France, but variable in Denmark, and South-Easterly in the west of Norway.

Sea rather rough in the extreme north as well as at Holyhead and Brest, but moderate to smooth elsewhere.

Barometer rising in Sweden, Denmark, Germany, and the east of our Islands, but falling elsewhere. Anticyclone lying over the Bay of Biscay and the extreme south-east of our Islands, with a depression off the west of Norway, and another over Germany. Fall extending to Sweden later.







Friday, February 10.

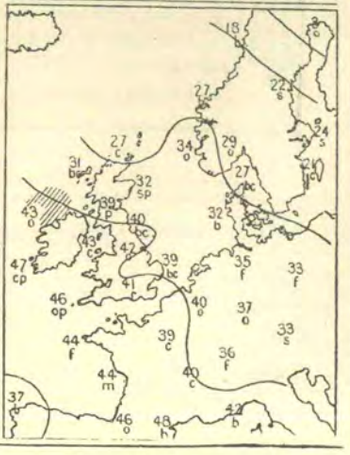
Weather fair over the greater part of our Islands, but with local showers. Fog or mist reported at several of the French and German stations, and snow in Sweden. Rain falling in south of England later.

Temperature fallen at all but the Swedish, Danish, and German stations; readings over the United Kingdom ranging at 8 a.m. from 47° at Valencia and Jersey to 27° at Sumburgh Head and Wick. Sharp frost occurring over Scotland at night.

Wind fresh North-Westerly on our extreme western coasts, but Westerly or South-Westerly at our more eastern stations, and South-Easterly or Easterly in Scandinavia. Subsequently veering to the North-Westward on our east coasts.

Sea moderate to smooth generally.

Barometer falling at all but the Norwegian stations. Pressure highest in the south-west of France, but comparatively high over Finland, with large shallow depression over the south of Norway. Depression subsequently moving south-eastwards.

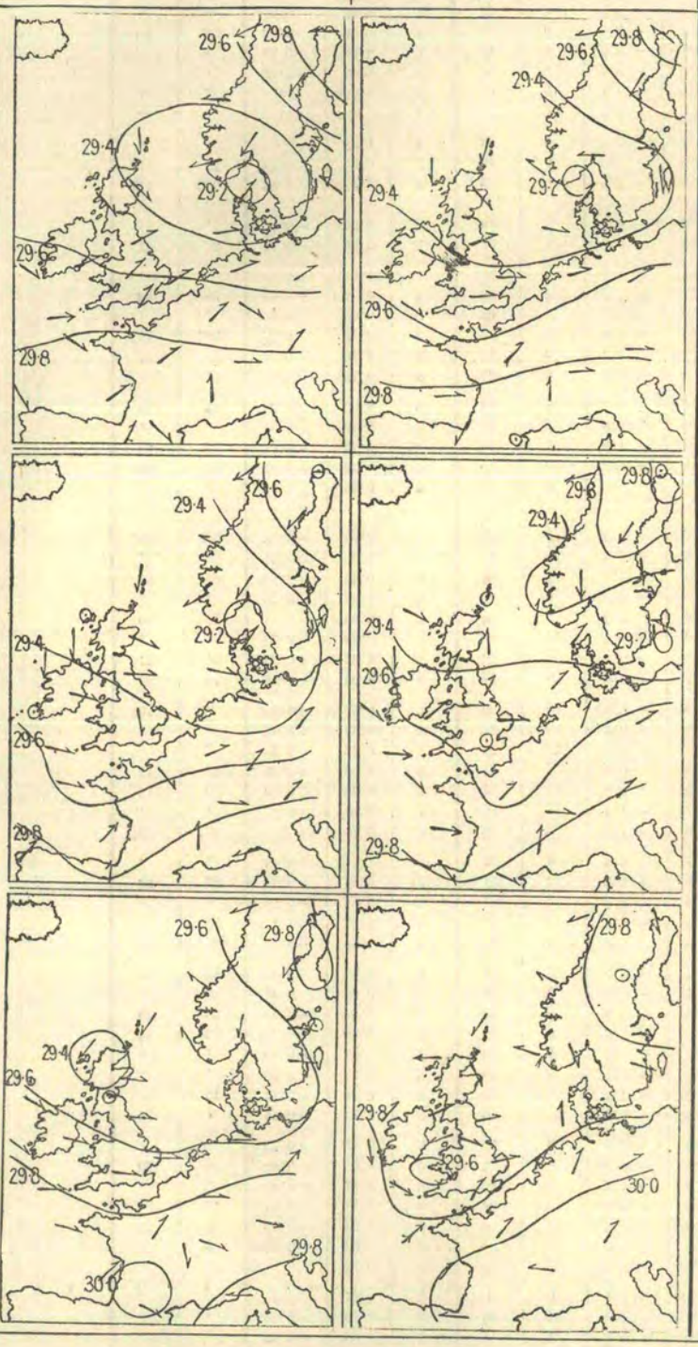


SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, February 11.

Weather fine in the east of our Islands but showery in the west and dull at most of the Continental stations; snow reported in Sweden and the south of Norway. Rain or sleet falling later in the south and south-east of England.

Temperature fallen at all but the German and a few of the French stations; readings over our Islands ranging from 46° at Scilly to 25° at Nairn. Frost occurring generally at night; thermometer at Wick falling to 16°.

Wind Easterly or North-Easterly in Scandinavia, but South-Westerly or Westerly elsewhere; moderate or fresh in force generally. Subsequently veering to the North-Westward on our western and northern coasts.

Sea moderate to smooth generally.

Barometer falling at all stations. Pressure highest over Spain and the south of France, with depression of previous day over the Skager Rack. Shallow disturbances advancing over England from the westward during latter part of day.

Sunday, February 12.

Weather fine over the greater part of our Islands as well as in Spain and the north of Norway, but cloudy elsewhere, with snow in Sweden and rain in the north of France. Snow showers falling later on our north and north-west coasts.

Temperature fallen in most places; readings over our Islands ranging from 43° Jersey to 19° at Wick. Maxima below 40° in many parts of the Kingdom and frost occurring occurring generally at night.

Wind light North-Westerly on our southern coasts and fresh North-Easterly in Scandinavia, but moderate Westerly or South-Westerly elsewhere. Subsequently blowing hard from the northward on our extreme north-west coasts.

Sea moderate to smooth generally.

Barometer rising a little in our Islands, but falling at most of the Continental stations. Pressure highest over the south of Spain and the western part of the Mediterranean. Depression still lying over the Skager Rack, and another small disturbance shown near the mouth of the Channel. Latter subsequently moving eastwards.

Monday, February 13.

Weather changeable and unsettled generally, with snow showers in many places. Heavy snow and sleet falling later over the southern parts of England.

Temperature fallen in most places; readings over our Islands ranging at 8 a.m. from 40° at Scilly to 20° at Aberdeen. Frost occurring in most places at night.

Wind moderate Westerly over England, Germany, and the north of France, but light North-Easterly in Scandinavia and the north of Scotland. Subsequently veering to the North-Westward on our western coasts.

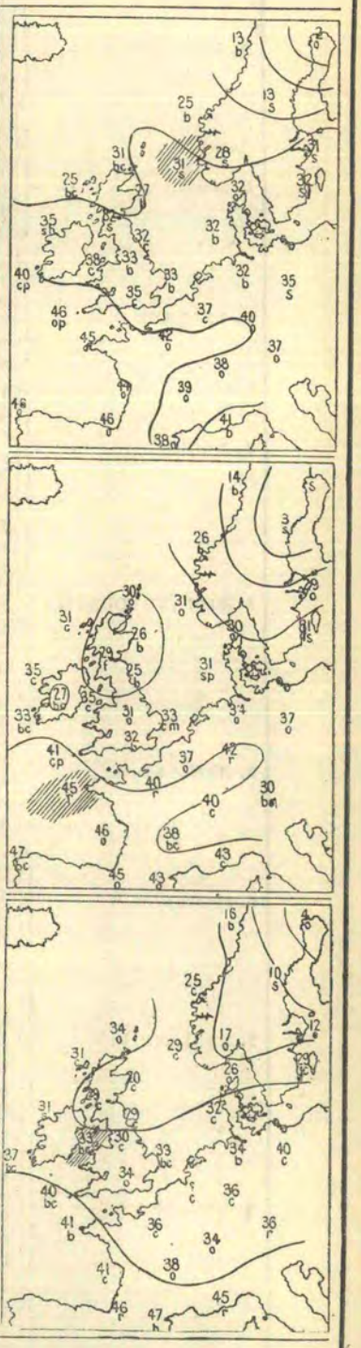
Sea rather rough at Holyhead and Cape Grisnez, but slight elsewhere.

Barometer rising generally. Pressure highest over Spain, France, and the Bay of Biscay, with small depressions over the north of Scotland and the Kattegat. New disturbances forming later at the mouth of the St. George's Channel, and barometer falling at all our southern stations.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; → = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	45	24	38·6	29·7	34·2	− 4·8	0	55	7	0·82	0·00	*	*
	Stornoway	48	21	39·7	31·0	35·4	− 3·8	0	46	6	0·99	−0·03	16	26
	Wick	47	15	38·3	27·1	32·7	− 6·2	0	65	6	1·03	+0·53	*	*
	Lairg ℳ	47	13	37·7	25·4	31·6	− 5·7	0	73	4	0·67	−0·13	*	*
	Glencarron ℳ	47	15	38·6	27·9	33·3	− 4·3	0	61	7	1·70†	?	?	?
	Fort Augustus ℳ	50	22	41·8	31·3	36·6	− 2·2	0	38	?	? †	?	*	*
1. SCOTLAND, E.	Nairn	49	23	40·1	31·7	35·9	− 2·8	0	43	4	0·38	−0·01	*	*
	Aberdeen	47	19	40·3	30·7	35·5	− 2·6	0	46	5	0·58	−0·03	29	47
	Braemar ℳ	46	12	40·7	25·2	33·0	− 1·5	0	63	4	0·12	−0·68	29‡	47‡
	Ochtertyre ℳ												*	*
	Leith	52	26	44·1	33·9	39·0	− 0·1	6	30	3	0·30	−0·11	*	*
	Marchmont ℳ	49	23	41·6	31·3	36·5	− 0·2	0	39	1	0·20	−0·44	26	41
2. ENGLAND, N.E.	Alnwick Castle	51	26	41·4	33·1	37·3	− 1·5	0	33	2	0·18	−0·40	*	*
	Durham	53	20	43·6	31·4	37·5	− 1·5	4	38	4	0·17	−0·28	36	56
	Shields	50	24	42·9	34·1	38·5	− 0·7	3	28	3	0·05	−0·36	*	*
	Scarborough ℳ	49	22	42·9	33·7	38·3	− 0·6	3	30	4	0·18	−0·27	31‡	48‡
	York	54	24	45·4	34·6	40·0	+ 0·8	10	28	3	0·13	−0·34	33	51
	Spurn Head	45	30	41·7	36·1	38·9	− 0·2	0	22	2	0·16	?	*	*
3. ENGLAND, E.	Hillington ℳ	51	23	44·2	33·0	38·6	− 0·4	6	33	5	0·50	+0·02	22	33
	Yarmouth	47	29	42·3	34·6	38·5	− 1·6	1	26	3	0·49	−0·01	*	*
	Geldeston	52	28	44·9	34·0	39·5	− 1·0	8	30	3	0·38	−0·02	17	26
	Cambridge	53	26	46·7	34·3	40·5	+ 0·5	13	30	4	0·32	−0·07	23	35
	Rothamsted	49	29	44·7	35·2	40·0	+ 0·5	8	26	6	0·56	−0·03	*	*
	Ingatestone												‡	‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	51	26	43·4	36·0	39·7	− 0·3	4	22	3	0·09	−0·33	33‡	50‡
	Loughborough	50	30	45·9	37·0	41·5	+ 1·8	11	21	2	0·28	−0·21	*	*
	Leicester	50	29	46·0	35·6	40·8	+ 1·7	11	25	3	0·34	−0·16	22	33
	Cheadle ℳ	46	26	41·9	33·0	37·5	− 1·6	0	32	5	0·27	−0·43	*	*
	Churchstoke ℳ	48	21	44·0	32·7	38·4	− 1·9	6	34	6	0·29	−0·42	19	29
	Hereford ℳ	52	26	46·9	34·9	40·9	+ 0·3	14	28	5	0·38	−0·22	*	*
	Cirencester	51	28	44·1	35·0	39·6	− 0·2	6	26	5	1·23	+0·52	14	21
	Oxford	50	30	45·0	36·4	40·7	+ 0·3	8	22	5	0·90	+0·38	13	20
5. ENGLAND, S.	London	50	30	45·7	37·1	41·4	+ 0·3	10	20	5	0·57	+0·09	7‡	10‡
	Strathfield Turgiss ℳ	52	29	45·4	36·4	40·9	+ 0·3	10	22	4	0·63	+0·07	*	*
	Dungeness	50	30	46·1	35·7	40·9	− 0·6	11	25	6	0·76	+0·23	*	*
	Hastings (St. Leonard's)	51	30	46·3	36·1	41·2	0·0	12	24	5	0·95	+0·39	12	18
	Southampton	53	30	46·4	36·8	41·6	+ 0·6	12	21	5	0·93	+0·20	10	15
	Hurst Castle	53	31	45·9	35·4	40·7	− 1·4	11	26	7	0·83	+0·17	*	*
	Stowell ℳ	50	29	44·0	35·1	39·6	− 1·4	6	26	6	0·75	?	12‡	18‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	49	20	41·3	32·1	36·7	− 3·0	0	37	6	1·31†	−0·83	*	*
	Glasgow	49	25	43·6	33·5	38·6	− 0·4	4	31	5	0·35	−0·60	20	32
	Ardrossan	48	26	43·4	35·3	39·4	− 0·1	4	25	5	0·64	−0·25	*	*
	Glenlee S	49	8	40·9	26·7	33·8	− 4·2	0	57	4	0·25	?	*	*
	Douglas (Isle of Man)	48	23	43·3	35·2	39·3	− 1·9	4	25	4	0·36	−0·62	27	42
7. ENGLAND, N.W.	Newton Reigny (Penrith)	47	11	41·1	29·6	35·4	− 2·7	0	46	6	0·86	+0·05	25	39
	Barrow-in-Furness	46	26	42·1	36·1	39·1	− 1·9	0	21	6	0·23	−0·47	*	*
	Stonyhurst	45	24	41·5	33·3	37·4	− 2·0	0	32	6	0·48	−0·49	26	40
	Blackpool ℳ	44	25	41·8	36·2	39·0	− 2·0	0	21	6	0·35	−0·28	22	34
	Manchester	46	25	41·0	34·3	37·7	− 2·3	0	30	4	0·33	−0·29	*	*
	Liverpool Obsy (Bidston)	47	30	42·3	37·7	40·0	− 1·1	1	15	6	0·73	+0·26	*	*
	Llandudno ℳ	48	29	44·0	37·1	40·6	− 1·4	6	19	5	0·21	−0·41	15	23
	Holyhead	48	33	44·7	39·7	42·2	− 0·8	11	6	5	0·13	−0·61	*	*
8. ENGLAND, S.W.	Llandovery	50	25	44·0	32·7	38·4	− 3·0	6	34	7	0·43	−0·74	*	*
	Pembroke	47	33	44·0	40·7	42·4	− 0·9	8	4	5	0·32	−0·49	13	20
	Arlington (N. Devon)	47	30	43·1	36·6	39·9	− 1·3	3	20	6	1·17	−0·07	*	*
	Cullompton ℳ	51	29	46·7	36·8	41·8	− 0·2	13	22	5	0·33	−0·51	16	24
	Falmouth	50	33	46·4	39·2	42·8	− 1·2	17	8	6	1·04	−0·15	18	27
	Plymouth	51	32	46·9	39·4	43·2	− 0·1	19	7	5	0·62	−0·25	9	13
	Prawle Point	53	31	47·3	37·6	42·5	− 0·5	22	12	4	0·72	?	*	*
9. IRELAND, N.	Malin Head	47	28	41·3	36·9	39·1	− 1·1	0	20	7	0·47	?	*	*
	Londonderry	49	27	42·4	35·1	38·8	− 1·8	1	25	7	0·73	−0·04	*	*
	Mullaghmore	48	30	42·9	38·0	40·5	− 0·7	3	15	7	0·86	−0·02	*	*
	Belmullet	50	29	44·0	38·6	41·3	− 2·4	6	13	6	1·09	?	*	*
	Markree Castle	50	24	42·4	33·5	38·0	− 2·5	1	30	7	0·99	+0·29	10	15
	Brookeborough	49	18	42·3	30·3	36·3	− 3·5	1	41	6	1·12	?	*	*
	Armagh	50	25	42·3	33·0	37·7	− 2·9	1	32	1	0·05	−0·60	13	20
	Donaghadee	49	26	43·0	35·6	39·3	− 1·7	3	23	4	0·23	−0·45	*	*
	Edgeworthstown	50	22	42·0	31·3	36·7	− 3·2	0	37	2	0·06	−0·74	*	*
10. IRELAND, S.	Dublin	50	28	44·3	36·1	40·2	− 1·6	6	22	2	0·03	−0·55	23	35
	Parsonstown	50	24	44·0	35·9	40·0	− 0·8	6	23	5	0·11	−0·51	13	20
	Kilkenny	50	21	43·7	35·9	39·8	− 1·2	5	23	2	0·23	−0·52	*	*
	Waterford	51	25	44·7	36·4	40·6	− 2·6	8	22	4	0·37	−0·65	*	*
	Roche's Point	51	31	44·7	39·7	42·2	− 1·8	11	6	3	0·03	−1·22	*	*
	Valencia	51	31	47·4	40·9	44·2	− 1·1	20	3	7	0·77	−0·55	14	21
	Killarney	51	23	45·5	34·9	40·2	− 3·3	10	27	6	0·91	?	*	*
	Foynes	49	25	43·4	37·2	40·3	− 1·5	4	18	6	1·10	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	49	37	48·3	42·4	45·4	− 0·6	24	0	5	0·56	−0·21	*	*
	Jersey (Noirmont)	50	36	47·3	41·7	44·5	+ 2·2	19	1	6	1·15	+0·47	9	13

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office Victoria Street.

NOTE.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 7.] *Second Series.* WEEK ENDING MONDAY, 20TH FEBRUARY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

DISTRICTS. (See p. 28.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
	°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	41	1	36·0	24·2	30·1	9 below.	0	− 8	83	+55	39	− 3	285	+60
1. SCOTLAND, EAST	45	4	37·2	24·0	30·6	7 below.	0	−12	80	+49	44	− 3	265	−10
2. ENGLAND, N.E.	41	20	37·7	29·0	33·4	6 below.	0	−12	60	+32	36	−13	224	−28
3. ENGLAND, EAST	43	25	36·4	29·9	33·2	7 below.	0	−15	62	+35	34	−27	270 *	+ 2
4. MIDLAND COUNTIES	42	19	36·5	27·2	31·9	9 below.	0	−17	71	+45	43	−29	283	+21
5. ENGLAND, SOUTH	45	22	37·5	28·9	33·3	9 below.	0	−18	61	+42	42	−39	258	+52
Principal Grazing, &c. Districts 6. SCOTLAND, WEST	44	11	38·4	26·1	32·3	8 below.	0	−13	68	+46	52	−14	198	− 6
7. ENGLAND, N.W.	43	8	38·1	27·6	32·9	8 below.	0	−13	64	+43	30	−33	201	− 6
8. ENGLAND, S.W.	44	18	38·4	28·5	33·5	10 below.	0	−21	60	+49	58	−67	206	+87
9. IRELAND NORTH	49	8	41·7	29·5	35·6	5 below.	0	−17	45	+26	77	−12	148	−33
10. IRELAND, SOUTH	49	18	41·8	29·6	35·7	7 below.	0	−24	44	+32	105	−38	120	0
— CHANNEL ISLANDS	46	30	40·9	33·5	37·2	7 below.	0	−26	34	+30	102	−49	91	+30

Rainfall.

DISTRICTS. (See p. 28.)	For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.
		10ths of In.				Ins.	Ins.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	5	6	2 less.	35	+ 1	6·3	−1·2
1. SCOTLAND, EAST	6	6	1 more.	27	+ 3	3·4	−0·9
2. ENGLAND, N.E.	5	7	3 more.	22	− 3	1·9	−1·4
3. ENGLAND, EAST	5	8	4 more.	23 *	− 3	2·2	−1·2
4. MIDLAND COUNTIES	3	6	0 (average).	19	− 7	1·7	−2·3
5. ENGLAND, SOUTH	4	4	1 less.	20	− 6	2·2	−2·1
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	2	2	7 less.	25	− 6	5·3	−2·6
7. ENGLAND, N.W.	4	2	5 less.	26	− 1	2·2	−2·9
8. ENGLAND, S.W.	4	2	8 less.	26	− 3	2·9	−4·2
9. IRELAND, NORTH	4	3	5 less.	26	− 6	3·7	−1·6
10. IRELAND, SOUTH	4	3	6 less.	21	−11	3·7	−2·9
— CHANNEL ISLANDS	6	5	2 less.	33	+ 1	3·2	−2·2

Bright Sunshine.

DISTRICTS. (See p. 28.)	For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	20	30	65	+ 7	17	+ 2
1. SCOTLAND, EAST	23	34	106	+18	27	+ 4
2. ENGLAND, N.E.	17	25	88	+34	21	+ 8
3. ENGLAND, EAST	9	12	93 *	+11	22	+ 2
4. MIDLAND COUNTIES	15	21	91	+22	22	+ 6
5. ENGLAND, SOUTH	12	18	78	+ 7	18	+ 2
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	34	50	99	+39	24	+ 9
7. ENGLAND, N.W.	27	40	88	+27	21	+ 6
8. ENGLAND, S.W.	33	47	109	+26	25	+ 5
9. IRELAND, NORTH	31	46	91	+10	22	+ 2
10. IRELAND, SOUTH	29	42	108	+16	23	+ 4
— CHANNEL ISLANDS	13	13	108	−10	24	− 3

General Remarks.

Weather has been in an unsettled state generally, with frequent showers of snow or sleet. Over the western parts of the Kingdom, however, the conditions were finer than elsewhere and intervals of clear sky were experienced.

Temperature has been considerably below the mean in all places, the deficit varying from 5° in "Ireland, N." to 7° or 8° in most other districts, to as much as 9° in "Scotland, N.", "England, S.", and the "Midland Counties", and 10° in "England, S.W." Over the United Kingdom generally the average temperature for the week has been lower than any registered during the present season. The highest of the maxima, which were recorded on somewhat irregular dates, ranged from 41° in "Scotland, N." and "England, N.E." to 46° in the "Channel Islands" and 49° over Ireland. On most days the readings were lower than these figures, maxima of about 35° being very frequent. The absolute minima were lower over Ireland and Scotland than any previously recorded during the winter. On the 16th, the thermometer fell to 1° in "Scotland, N." (at Lairg), to 4° in "Scotland, E." (at Braemar), and to 8° in "Ireland, N." (at Brookeborough). Over England, where the minima were recorded on irregular dates, they ranged from 8° in "England, N.W." (at Newton Reigny), to 18° in "England, S.W." and to 25° in "England, E."

Rainfall has been rather more than the mean in most of the "Wheat-producing districts" but less in the "Grazing districts".

Bright sunshine shows a decrease over the eastern and central parts of Great Britain, but a decided increase over all the western and south-western counties, as well as in the west and north of Scotland.

Depressions observed.—During this period the barometer has been generally highest in the western and northern parts of our area, while depressions have been shown in the south and south-east. On the 14th and 15th, the small depression which had travelled to our south-east coasts from the south of Ireland moved slowly in a south-easterly direction and finally dispersed. This disturbance was succeeded by a very small system which advanced from the north-westward and moved quickly down the western coasts of England on the 17th, but from this time the only depressions shown were either over Germany, the Netherlands, or France. Under these conditions fresh to strong winds from between North and East prevailed on our coasts, and in the extreme south-east at times attained the force of a gale. On the 19th a gale was also experienced at some of our north-western stations.

* This value has been altered owing to the receipt of further information.

A 53404. 350.—2/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.

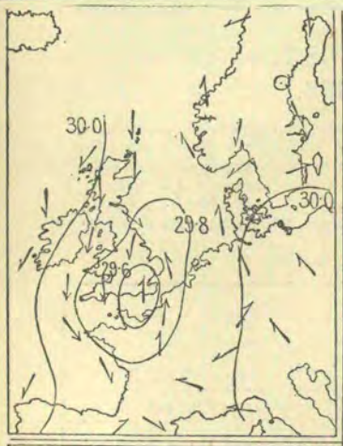
Weather

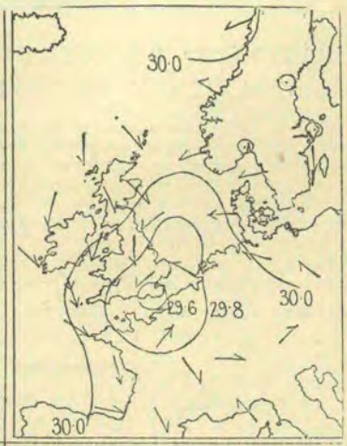
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, February 14.

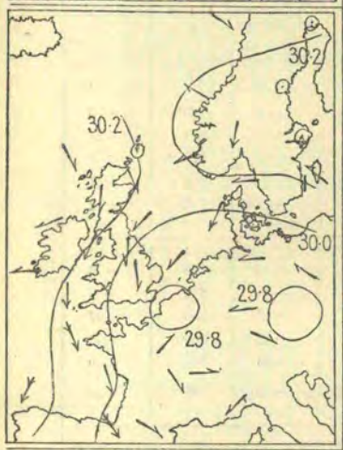
Weather fine in some localities, but generally changeable and unsettled, with snow in many parts of Great Britain as well as in Scandinavia. Rain falling later at some of the French stations.

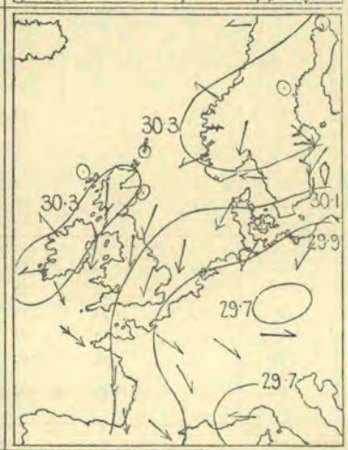
Temperature risen a few degrees in the north of our Islands, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 39° at Scilly to 24° at Parsonstown and 21° at York. Frost occurring generally at night.

Wind Northerly over the greater part of our Islands and the west of France; strong at some of our western stations. Light from South or South-East over Germany, the Netherlands, and the eastern shores of the North Sea. Subsequently increasing to slight gale from the Northward in the east and south of England.

Sea rather rough off the west and south-west of England.

Barometer rising at all but the French and Dutch stations. Areas of high pressure lying over Germany and to the westward of our Islands, and rather deep depression over the south-east of England. No important change later.





Wednesday, February 15.

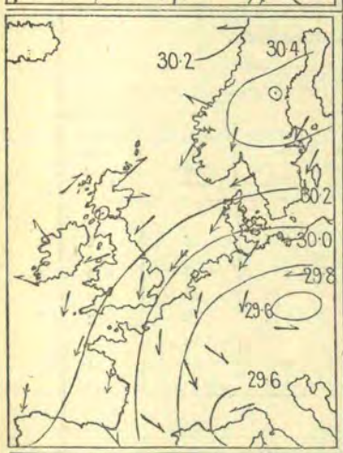
Weather dull and unsettled over Germany, Denmark, and the eastern parts of England and France, with snow in many places, but fair or fine elsewhere.

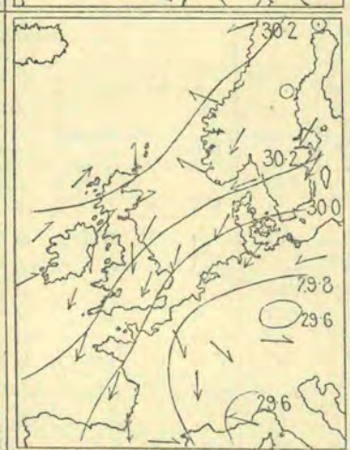
Temperature risen a little in England, Ireland, and Germany, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 41° at Scilly to 22° at Nairn. Severe frost occurring over Scotland at night; sheltered thermometer at Lairg only 1° above zero.

Wind light from North-West in Scotland, but strong from the Northward over England, Ireland, and the west of France. Light variable breezes reported in Germany and the east of France, and calm in Sweden.

Sea rough on several parts of our west and also on our north-east coasts.

Barometer rising at all but the German and southern French stations. Anticyclonic systems lying respectively over Sweden and to the westward of our Islands. Depression of previous day now moving slowly across the north-east of France, but other disturbances shown over Germany and the Gulf of Genoa.





Thursday, February 16.

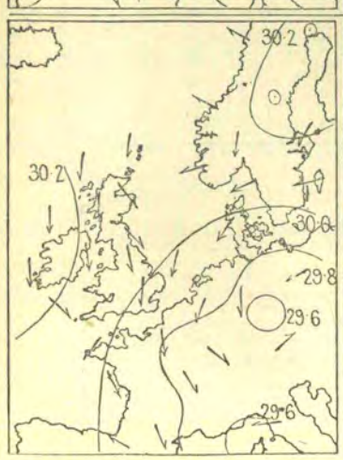
Weather fine in Scandinavia and the west and north of our Islands, but cloudy or overcast elsewhere, with snow in many places. Subsequently becoming dull on our extreme north and north-west coast.

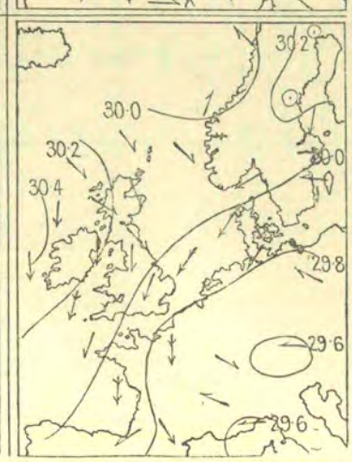
Temperature fallen generally; readings over our Islands ranging at 8 a.m. from 38° at Valencia and Scilly to 10° at Aberdeen. Rapid rise taking place in Scotland later, but frost occurring generally at night.

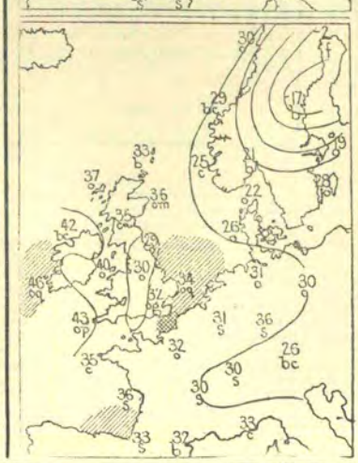
Wind strong from North-East or North over Denmark, France, and the south-east of England, but light from East or South-East in Ireland, and from South-West in the north of Scotland.

Sea rough on our east and south coasts, but moderate to smooth elsewhere.

Barometer rising over Scandinavia, Denmark, and the greater part of our Islands, but falling in Germany and France. Anticyclonic band extending from Scandinavia to the south of Ireland, with depressions over Germany and the Gulf of Genoa. Fall taking place on our northern coasts later.







Friday, February 17.

Weather fair in the west and north of our Islands, and also in Scandinavia, but dull and unsettled elsewhere, with snow in many places.

Temperature risen considerably in the north of our Islands, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 46° at Valencia to 26° at Oxford. Frost occurring at night at all but our western stations.

Wind chiefly Northerly, but somewhat variable over Germany and the north of Scandinavia; strong in force on our east and west coasts as well as over the Bay of Biscay. Subsequently backing to the North-Westward on our extreme northern coasts.

Sea rough on our east and south-east coasts as well as at Valencia.

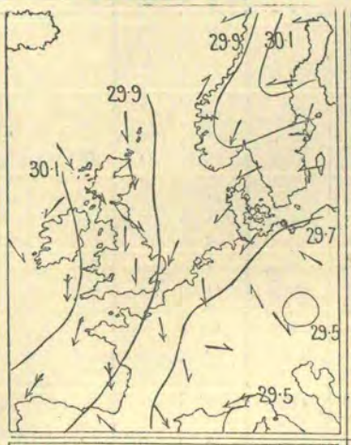
Barometer falling generally. Areas of high pressure lying respectively over the Gulf of Bothnia and to the westward of our Islands, with a large shallow depression to the westward of Norway, and smaller disturbances over North Wales, Germany, and the Gulf of Genoa. Rise taking place over our Islands later.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

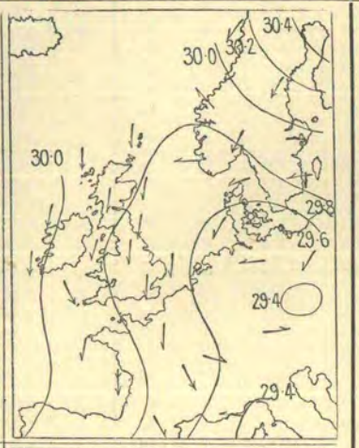
Synoptic Charts.

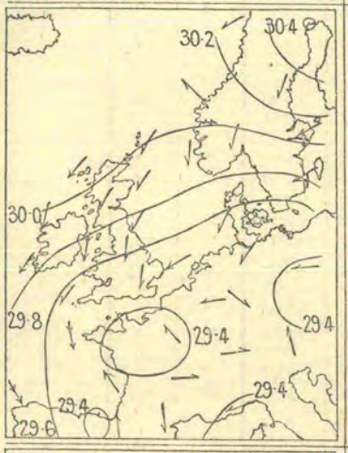
PRESSURE AND WIND.

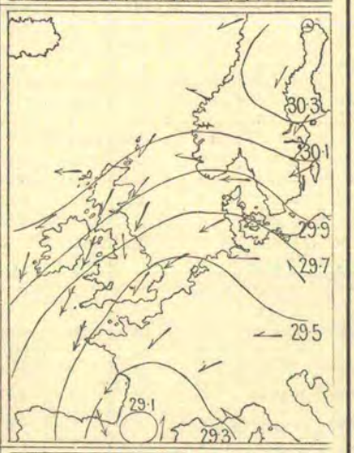
8 a.m.

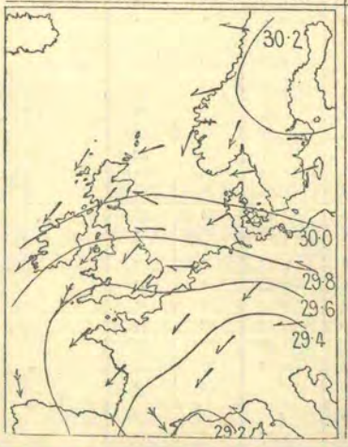


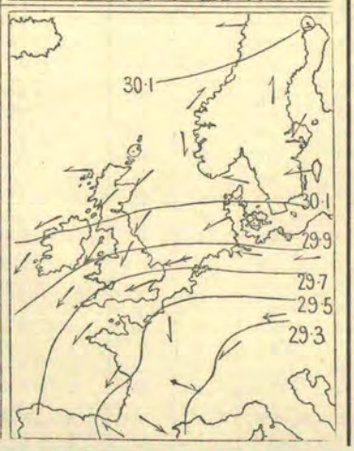
6 p.m.











Weather

During the 24 hours succeeding

8 a.m. on the dates given.

Saturday, February 18.

Weather fair in many parts of England, but cloudy elsewhere, with rain in the north of Ireland and snow at several of the Continental stations. Snow showers falling later in many parts of the United Kingdom.

Temperature risen a little in most places; readings over our Islands ranging at 8 a.m. from 47° at Belmullet to 31° at Oxford. Frost occurring generally at night.

Wind chiefly Northerly; strong to a gale in force at several of our southern and the French stations. Subsequently increasing to strong breeze on some of our northern coasts.

Sea rough on exposed parts of the English coasts, but moderate to smooth elsewhere.

Barometer falling generally. Area of high pressure lying respectively over the Gulf of Bothnia and to the south-westward of our Islands, with depressions over Germany and the Gulf of Genoa.

Sunday, February 19.

Weather fine in Norway and the extreme west and north of our Islands, but cloudy elsewhere, with snow in many places.

Temperature fallen generally; readings over our Islands ranging at 8 a.m. from 39° at Valencia to 29° at Oxford. Frost occurring at night at all but our western stations.

Wind fresh or strong from the North-Eastward over our Islands, the north of France, and the eastern shores of the North Sea, with a gale in the Irish Sea. Fresh Southerly in the south-west of France, variable in Germany.

Sea rough on many of the exposed parts of our coasts.

Barometer falling at all but our extreme northern and the Scandinavian stations. Anticyclone lying over the Gulf of Bothnia, with depressions over Germany, the north of France, the Gulf of Genoa, and the southern part of the Bay of Biscay. French and German depressions subsequently moving southwards, and barometer rising in all parts of our Islands.

Monday, February 20.

Weather cloudy or overcast in most places, with snow in several parts of our Islands and Scandinavia. Some improvement taking place in the west and north later.

Temperature risen a little in our Islands and Scandinavia, but fallen elsewhere; readings over the United Kingdom ranging from 39° in the west and north of Ireland to 30° at Loughborough, Oxford, and Cambridge. Frost occurring in most places at night.

Wind chiefly North-Easterly; fresh or strong in force generally, with gales over the Irish Sea and the mouth of the English Channel. Strong gale in south-east of England at night.

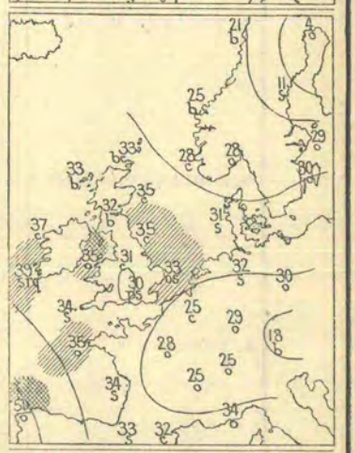
Sea rough on most of our eastern and western coasts.

Barometer falling a little in the west of our Islands, but rising elsewhere. Pressure highest in Sweden, with depressions over the Gulf of Lyons and the southern part of the Bay of Biscay. Further disturbances appearing over France later, and barometer falling slightly on our southern coasts.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

DATE OF REPORT.	NAMES OF STATIONS.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°	°	Inches.	Inches.		
Week ending 13 February	Fort Augustus	—	—	—	—	—	—	—	—	6	0·62	?	—	—
„ 13 „	Ingatestone	49	30	44·3	36·9	40·6	+ 0·6	6	19	5	0·48	+ 0·08	11	17

III.—DATA from which the SUMMARY on page 25 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	41	23	37·0	27·6	32·3	− 6·7	0	68	4	0·35	−0·46	*	*
	Stornoway	41	20	37·7	27·7	32·7	− 6·8	0	65	6	0·56	−0·41	20	30
	Wick	38	10	35·7	23·1	29·4	− 9·6	0	88	5	0·88	+0·38	*	*
	Lairg	40	1	34·4	19·7	27·1	−10·3	0	104	4	0·53	−0·26	*	*
	Glencarron	40	16	35·0	24·5	29·8	− 8·2	0	85	4	0·49†	?	?	?
	Fort Augustus	40	5	36·1	22·8	29·5	− 9·4	0	88	4	0·51†	?	*	*
1. SCOTLAND, E.	Nairn	41	9	37·0	22·0	29·5	− 9·5	0	88	6	0·54	+0·15	*	*
	Aberdeen	40	10	37·7	22·7	30·2	− 8·4	0	83	6	0·90	+0·29	28	42
	Braemar	37	4	34·3	21·4	27·9	− 7·1	0	99	4	0·30	−0·51	24‡	36‡
	Ochtertyre												*	*
	Leith	45	19	39·9	27·0	33·5	− 6·2	0	60	6	0·47	+0·07	*	*
	Marchmont	39	22	37·1	26·7	31·9	− 5·4	0	71	7	1·01	+0·39	16	24
2. ENGLAND, N.E.	Alnwick Castle	38	25	36·9	30·4	33·7	− 5·3	0	58	6	0·59	0·00	*	*
	Durham	39	20	36·8	27·1	32·0	− 7·0	0	70	6	0·56	+0·11	14	21
	Shields	40	25	38·6	27·9	33·3	− 6·5	0	61	4	0·50	+0·10	*	*
	Scarborough	39	22	37·4	30·2	33·8	− 5·5	0	57	6	1·23	+0·79	18‡	26‡
	York	41	20	38·1	26·3	32·2	− 7·6	0	69	4	0·99	+0·52	20	29
	Spurn Head	40	30	38·4	32·3	35·4	− 4·3	0	46	5	0·49	?	*	*
3. ENGLAND, E.	Hillington	37	25	36·1	29·7	32·9	− 6·9	0	64	4	1·42	+0·93	10	14
	Yarmouth	37	30	36·1	31·6	33·9	− 7·0	0	57	6	1·15	+0·65	*	*
	Geldeston	43	30	36·8	31·0	33·9	− 7·1	0	57	7	0·87	+0·46	6	9
	Cambridge	39	27	36·9	28·7	32·8	− 7·9	0	64	4	0·54	+0·14	9	13
	Rothamsted	41	26	36·4	28·4	32·4	− 7·5	0	67	4	0·32	−0·26	*	*
	Ingatestone	41	28	36·3	30·2	33·3	− 7·6	0	61	4	0·58	+0·18	9‡	13‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	41	24	37·0	28·4	32·7	− 7·7	0	65	3	0·70	+0·28	13‡	19‡
	Loughborough	42	24	38·4	28·6	33·5	− 6·6	0	60	4	0·57	+0·07	*	*
	Leicester													
	Cheadle	39	22	36·0	26·1	31·1	− 8·4	0	76	4	0·23	−0·48	*	*
	Churchstoke	41	19	35·0	25·3	30·2	−10·5	0	83	3	0·14	−0·57	16	23
	Hereford	41	22	37·1	27·6	32·4	− 8·7	0	67	4	0·21	−0·39	*	*
	Cirencester	39	26	35·9	26·3	31·1	− 9·0	0	76	2	0·52	−0·18	20	29
	Oxford	40	22	36·0	27·9	32·0	− 8·9	0	70	4	1·65	+1·14	10	14
5. ENGLAND, S.	London	41	29	37·4	31·1	34·3	− 7·4	0	54	5	0·22	−0·26	5‡	7‡
	Strathfield Turgiss	40	23	37·1	28·6	32·9	− 8·5	0	64	4	0·59	+0·03	*	*
	Dungeness	40	22	36·9	30·0	33·5	− 8·5	0	60	6	0·61	+0·10	*	*
	Hastings (St. Leonard's)	39	23	37·2	30·1	33·7	− 8·3	0	58	6	1·07	+0·55	11	16
	Southampton	43	26	38·8	29·5	34·2	− 7·5	0	55	3	0·17	−0·53	18	26
	Hurst Castle	45	24	40·4	27·1	33·8	− 8·8	0	57	1	0·08	−0·55	*	*
	Stowell	38	23	35·0	26·2	30·6	−10·6	0	80	2	0·33	?	15‡	21‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	42	20	37·3	26·9	32·1	− 7·9	0	69	3	0·28†	−1·88	*	*
	Glasgow	41	20	38·3	27·9	33·1	− 6·4	0	62	2	0·18	−0·73	29	43
	Ardrossan	44	21	40·1	26·9	33·5	− 6·3	0	60	1	0·10	−0·75	*	*
	Glenlee	40	11	37·2	20·4	28·8	− 9·4	0	92	0	—	?	*	*
	Douglas (Isle of Man)	43	21	39·2	28·6	33·9	− 7·5	0	57	4	0·17	−0·75	39	57
7. ENGLAND, N.W.	Newton Reigny (Penrith)	39	8	36·2	19·5	27·9	−10·7	0	99	6	0·38	−0·38	18	26
	Barrow-in-Furness	42	23	39·6	27·0	33·3	− 7·9	0	61	1	0·20	−0·50	*	*
	Stonyhurst	40	17	36·7	26·0	31·4	− 8·3	0	74	3	0·21	−0·74	31	46
	Blackpool	40	23	38·4	27·1	32·8	− 8·6	0	64	5	0·20	−0·41	35	52
	Manchester	41	24	37·2	28·0	32·6	− 7·8	0	66	5	0·17	−0·43	*	*
	Liverpool Obsy (Bidston)	40	26	37·3	28·6	33·0	− 8·5	0	63	3	0·17	−0·28	*	*
	Llandudno	43	26	39·1	30·8	35·0	− 7·5	0	49	2	0·15	−0·45	24	35
	Holyhead	42	30	40·3	33·7	37·0	− 6·0	0	35	4	0·21	−0·50	*	*
8. ENGLAND, S.W.	Llandovery	41	18	38·1	26·4	32·3	− 9·7	0	68	2	0·07	−1·06	*	*
	Pembroke	42	30	39·9	31·7	35·8	− 8·0	0	43	5	0·16	−0·63	36	52
	Arlington (N. Devon)	38	20	35·9	26·9	31·4	−10·4	0	74	3	0·18	−1·07	*	*
	Cullompton	44	20	37·5	26·8	32·2	−10·0	0	69	4	0·20	−0·63	22	31
	Falmouth	42	29	39·6	32·4	36·0	− 8·0	0	42	5	0·24	−0·87	37	53
	Plymouth	42	27	38·7	28·9	33·8	−10·0	0	57	3	0·14	−0·68	37	53
	Prawle Point	41	25	38·9	26·7	32·8	−10·4	0	64	3	0·06	?	*	*
9. IRELAND, N.	Malin Head	44	29	40·9	32·4	36·7	− 3·8	0	37	4	0·10	?	*	*
	Londonderry	45	22	42·4	29·7	36·1	− 4·5	1	44	5	0·44	−0·27	*	*
	Mullaghmore	46	29	43·0	32·0	37·5	− 3·6	3	36	3	0·30	−0·58	*	*
	Belmullet	49	30	43·7	34·1	38·9	− 4·6	5	29	5	0·69	?	*	*
	Markree Castle	46	15	41·0	27·5	34·3	− 6·1	0	54	4	0·33	−0·55	30	44
	Brookeborough	44	8	41·7	23·8	32·8	− 7·0	0	64	3	0·15	?	*	*
	Armagh	45	19	41·7	26·8	34·3	− 6·8	0	54	1	0·07	−0·58	32	47
	Donaghadee	43	25	40·9	32·3	36·6	− 4·5	0	38	4	0·13	−0·55	*	*
	Edgeworthstown	45	19	39·7	26·6	33·2	− 6·9	0	62	4	0·33	−0·49	*	*
10. IRELAND, S.	Dublin	44	25	40·3	29·2	34·8	− 7·4	0	50	3	0·30	−0·28	32	46
	Parsonstown	47	20	41·0	25·4	33·2	− 7·9	0	62	4	0·21	−0·39	34	49
	Kilkenny	43	18	39·0	26·0	32·5	− 9·0	0	67	3	0·15	−0·57	*	*
	Waterford	45	19	40·7	25·4	33·1	−10·8	0	62	3	0·16	−0·79	*	*
	Roche's Point	46	29	42·3	32·1	37·2	− 7·0	1	35	3	0·12	−1·06	*	*
	Valencia	49	33	46·0	37·6	41·8	− 3·6	11	18	5	0·68	−0·62	22	32
	Killarney	49	23	43·1	29·6	36·4	− 7·4	3	45	4	0·41	?	*	*
	Foynes	48	25	41·9	31·2	36·6	− 5·4	0	38	3	0·14	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	46	32	42·4	34·1	38·3	− 7·7	1	28	7	0·43	−0·31	*	*
	Jersey (Noirmont)	42	30	39·3	32·9	36·1	− 6·4	0	41	5	0·60	−0·08	13	18

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 8.] *Second Series.* WEEK ENDING MONDAY, 27TH FEBRUARY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 32.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	46	18	39·4	29·2	34·3	4 below.	0	− 9	54	+25	39	−12	339	+ 84
	1. SCOTLAND, EAST	42	22	36·7	30·0	33·4	5 below.	0	−13	60	+29	44	−20	325	+ 18
	2. ENGLAND, N.E.	40	27	35·8	31·2	33·5	6 below.	0	−13	60	+32	36	−30	284	+ 5
	3. ENGLAND, EAST	37	18	33·0	26·0	29·6	11 below.	0	−17	87	+60	34	−46	357	+ 63
	4. MIDLAND COUNTIES	41	17	34·0	26·9	30·5	10 below.	0	−18	81	+54	43	−49	363 *	+ 74
	5. ENGLAND, SOUTH	40	19	33·9	26·7	30·3	12 below.	0	−20	82	+63	42	−58	340	+114
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	42	26	37·9	31·6	34·8	5 below.	0	−14	50	+27	52	−26	248	+ 20
	7. ENGLAND, N.W.	41	22	36·1	30·0	33·1	8 below.	0	−13	57	+36	30	−45	258	+ 28
	8. ENGLAND, S.W.	41	21	35·3	27·8	31·6	12 below.	0	−22	73	+61	58	−88	279	+145
	9. IRELAND NORTH	48	20	38·7	31·5	35·1	6 below.	0	−18	48	+29	77	−30	196	− 3
	10. IRELAND, SOUTH	44	17	38·7	31·1	34·9	8 below.	0	−24	50	+38	105	−61	170	+ 34
	— CHANNEL ISLANDS	41	21	37·8	31·6	34·8	10 below.	0	−26	50	+46	102	−74	141	+ 75

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 32.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	3	1	6 less.	38	− 1	6·4	−1·9	18	26	83	+ 9	18	+ 2
	1. SCOTLAND, EAST	4	3	3 less.	31	+ 3	3·7	−1·1	5	7	111	− 7	24	− 2
	2. ENGLAND, N.E.	4	3	1 less.	26	− 3	2·2	−1·5	2	3	90	+18	19	+ 4
	3. ENGLAND, EAST	2	1	3 less.	25	− 5	2·3	−1·6	7	9	100	+ 3	21	+ 1
	4. MIDLAND COUNTIES	2	1	4 less.	21	− 9	1·8	−2·8	4	6	95	+ 9	19	+ 2
	5. ENGLAND, SOUTH	2	2	4 less.	22	− 8	2·4	−2·4	13	18	91	+ 5	18	+ 1
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	1	less than ½	8 less.	26	− 9	5·3	−3·4	11	16	110	+33	23	+ 7
	7. ENGLAND, N.W.	3	1	6 less.	29	− 2	2·3	−3·5	12	17	100	+22	21	+ 5
	8. ENGLAND, S.W.	1	1	9 less.	27	− 6	3·0	−5·1	17	24	126	+24	25	+ 5
	9. IRELAND, NORTH	1	less than ½	7 less.	27	−10	3·7	−2·3	11	15	102	+ 3	21	+ 1
	10. IRELAND, SOUTH	1	1	7 less.	22	−14	3·8	−3·7	16	22	124	+11	25	+ 2
	— CHANNEL ISLANDS	3	3	3 less.	36	− 1	3·5	−2·6	6	8	114	−30	22	− 6

General Remarks.

Weather has been in a dull and gloomy condition in all parts of the Kingdom. Slight showers of snow have been experienced at nearly all stations, but few heavy falls have occurred.

Temperature has continued below the mean in all districts. In Scotland, the deficit varied from 4° to 5°, and in Ireland from 6° to 8°, but over the greater part of England it was as much as 10°, 11°, or 12°. Over England and Ireland the temperature was even lower than that of last week. The difference of the weekly average from the mean for the season over England has not been so large since the week ending 24th January 1881. The highest of the maxima, which were generally recorded either on the 21st or 27th, ranged from 37° in "England, E." to 48° in "Ireland, N." The lowest of the minima, which were registered on rather irregular dates, varied from 17° in the "Midland Counties" and "Ireland, S." to 26° in "Scotland, W." and 27° in "England, N.E." The very low average over England and Ireland is not so much due to low minima as to the extremely low maxima which have prevailed.

Rainfall has been considerably less than the mean in nearly all districts.

Bright sunshine has been very deficient generally, the percentage of the possible amount of duration ranging from 3 in "England, N.E.", 6 in the "Midland Counties", 7 in "Scotland, E.", and 8 in the "Channel Islands", to 24 in "England, S.W." and 26 in "Scotland, N."

Depressions observed.—During the whole of this period the barometer continued highest over the northern parts of our area, and depressions were again shown over various parts of France and Germany. None of them, however, were deep, and towards the end of the week they had almost entirely dispersed. North-Easterly to Easterly winds consequently held in all parts of the United Kingdom, and though moderate to fresh generally, they increased to the force of a gale at times on our south-east coasts.

* This value has been altered owing to the receipt of further information.

A 53498. 350.—3/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

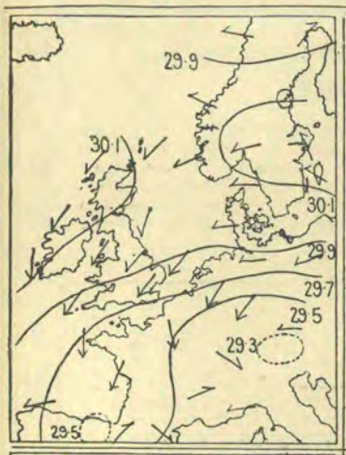
Weather

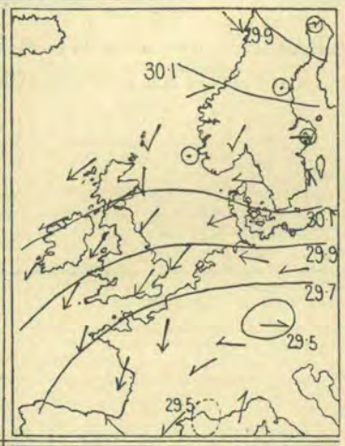
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, February 21.

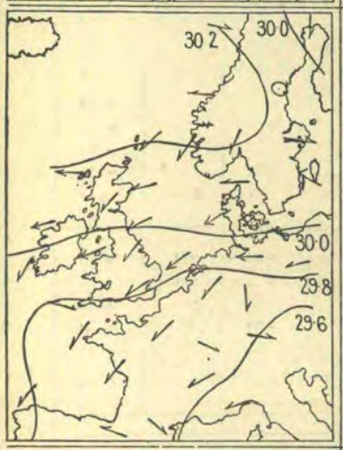
Weather fine in the west of our Islands and also in the north of Sweden, but cloudy elsewhere, with rain or snow locally. Cold showers falling later at several of our western stations.

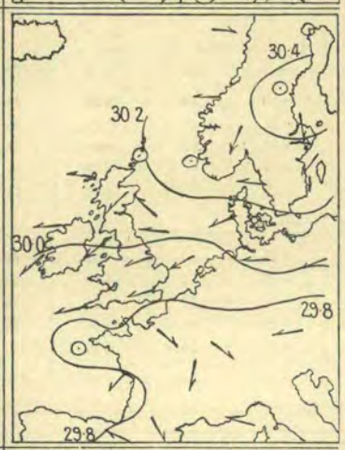
Temperature risen a little in France, but fallen slightly elsewhere; readings over our Islands ranging at 8 a.m. from 39° at Malin Head, Donaghadee, and Scilly to 32° at Loughborough and 30° at Parsonstown.

Wind light Southerly in Sweden and variable in the south of France, but Easterly or North-Easterly elsewhere; strong to a gale in force over the Channel and south-east of England.

Sea high at Cape Gris Nez, and rough on our south and east coasts generally.

Barometer falling at all but the English and French stations. An anticyclone lying over the south of Scandinavia, and another over Ireland and Scotland, with depressions over South Germany and the north-east of Spain. Rise taking place in north later, and high pressure systems uniting.





Wednesday, February 22.

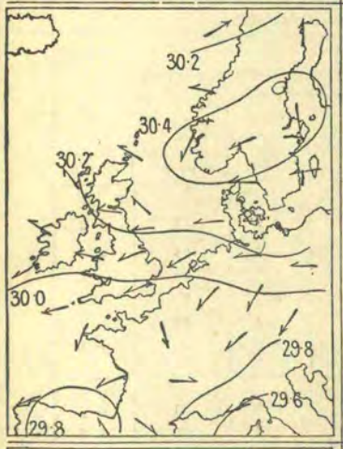
Weather fine in Scandinavia and the south of Ireland, but cloudy elsewhere, with snow showers in the west and north of England. Snow falling later in many parts of the United Kingdom.

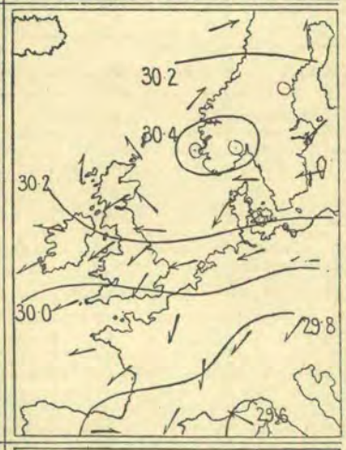
Temperature risen a little in Scandinavia and Scotland, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 39° at Wick to 30° at Dungeness and in London. Thermometer in south-east of England not exceeding 32° all day.

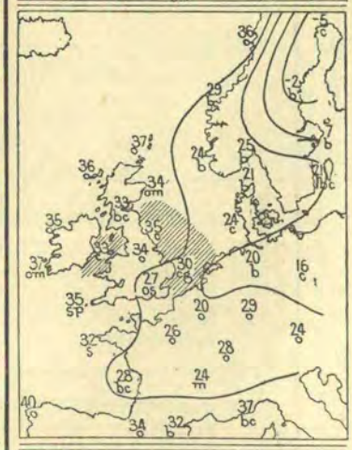
Wind chiefly Easterly or North-Easterly; strong in force in the south-east of England and north of Ireland.

Sea rough on our east and south-east coasts, but moderate to smooth elsewhere.

Barometer rising at all but our western stations. Anticyclone lying off the north-west of Norway, with a large area of low readings over Switzerland and the south-east of France. No important change later.







Thursday, February 23.

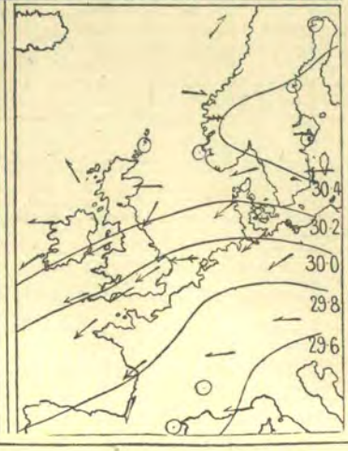
Weather fine in Denmark and the southern parts of Scandinavia and France, but cloudy elsewhere, with snow at Scilly, Brest, and in London. Snow showers falling later at several of our southern and south-eastern stations.

Temperature fallen a little in most places; readings over our Islands ranging at 8 a.m. from 37° at Sumburgh Head and Valencia to 27° in London. Maxima below 40° generally, and below 32° in the south-east of England.

Wind moderate South-Easterly on our extreme north and north-west coast, but Easterly or North-Easterly elsewhere; strong in force in the south-east of England.

Sea rather rough on our east and south-east coasts.

Barometer falling a little in Spain and also in the north of Scandinavia, but rising elsewhere. Anticyclone lying over the southern parts of Sweden and Norway, with a depression over the Gulf of Genoa, and a large shallow area of low pressure over Spain.



Friday, February 24.

Weather fair in the west and north of our Islands and also in Scandinavia, Denmark, and the extreme south of France, but dull elsewhere, with snow in Germany, Belgium, and the south-east of England. Snow showers falling later at several of our northern stations.

Temperature almost unchanged; readings over our Islands ranging at 8 a.m. from 35° at Wick, Shields, Malin Head, and Mullaghmore to 26° at Dungeness and Yarmouth. Maxima again below the freezing point at several of our south-eastern stations, with hard frost over England at night.

Wind Southerly in the west of Norway, but Easterly or North-Easterly elsewhere; strong in force in the east and south of England.

Sea rough on our eastern and southern coasts.

Barometer rising in our Islands, but falling at several of the Continental stations; distribution of pressure similar to that of previous day. Slight fall taking place over the United Kingdom later.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

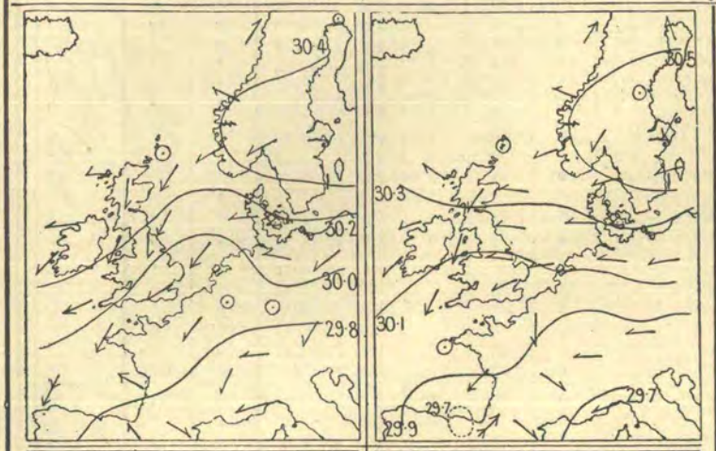
Weather

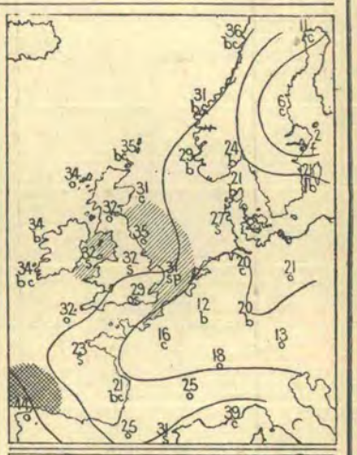
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Saturday, February 25.

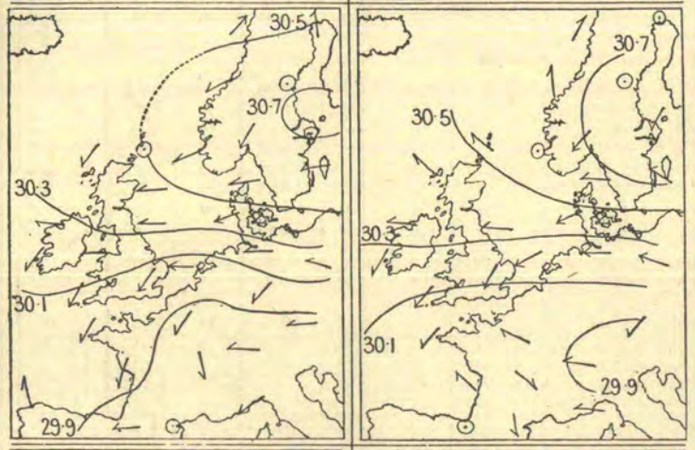
Weather dull and unsettled over the more central parts of our Islands, with snow in many places but fine at the outlying and most of the Continental stations.

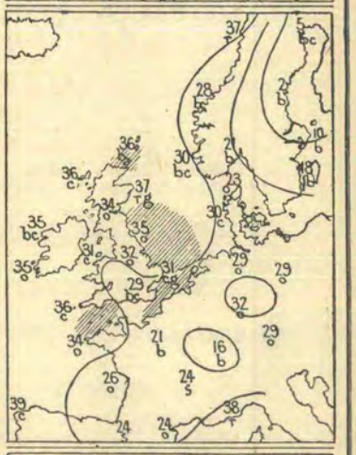
Temperature fallen in most places; readings over our Islands ranging at 8 a.m. from 36° at Donaghadee to 25° at Prawle Point. Maxima again below 40° at all but our extreme northern stations.

Wind South-Easterly in the south-west of France, but Easterly or North-Easterly elsewhere; light or moderate in force generally, but fresh or strong over England and the north of Ireland.

Sea rough off the east and south-east of England, and rather rough at Holyhead, but moderate to smooth elsewhere.

Barometer rising at all but our eastern stations. Anticyclone still lying over Scandinavia, with areas of relatively low pressure over the north-east of Spain and the Gulf of Lyons. Slight fall taking place in west later.





Sunday, February 26.

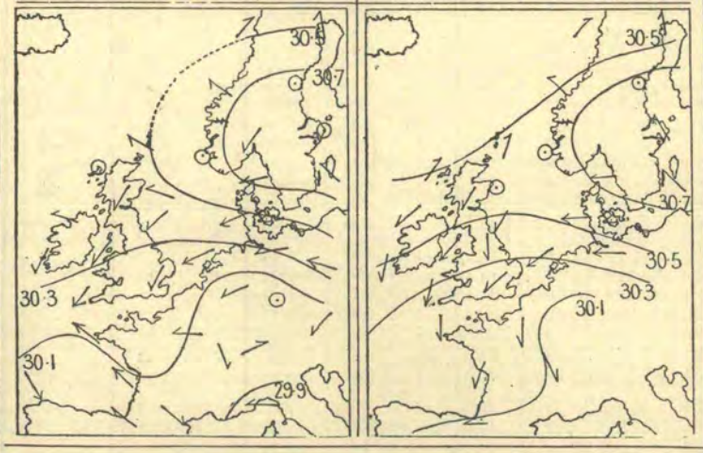
Weather fine in Scandinavia, the south of our Islands, and some parts of France, but cloudy elsewhere with showers of sleet or rain in the east of Scotland.

Temperature risen several degrees in Germany and the north of France, but changed little elsewhere; readings over our Islands ranging at 8 a.m. from 38° at Wick to 27° at Pembroke and Prawle Point. Maxima again below 40° at all but our extreme northern stations.

Wind South-Westerly in the north of Scandinavia, but Easterly or North-Easterly elsewhere; strong in force on our eastern and southern coasts.

Sea rough on our east and south-east coasts, and rather rough at Wick and Prawle Point.

Barometer rising generally. Anticyclone still lying over Scandinavia, with a large area of relatively low pressure over France. Slight fall taking place in east of England later.



Monday, February 27.

Weather fine in Scandinavia, Denmark, Germany, and the south-west of France, but cloudy elsewhere.

Temperature risen a little in our Islands and the south of France, but fallen in most other localities; readings over the United Kingdom ranging at 8 a.m. from 39° at Wick to 31° at Oxford and 30° at Parsonstown. Maxima below 40° at all but our western and northern stations.

Wind South-Westerly in the north of Scandinavia, but Easterly or North-Easterly elsewhere; fresh in force on exposed parts of our coasts.

Sea rather rough off the east and south-east of England.

Barometer rising at all but the northern Scandinavian stations. Anticyclone still lying over Sweden, with areas of relatively low pressure over the north-east of Spain and the Gulf of Genoa. Slight fall taking place in Scandinavia later.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°	°	Inches.	Inches.		
Week ending February 20	Leicester	38	25	36·9	28·9	32·9	− 7·2	0	64	4	0·48	− 0·02	15	22

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	42	30	40·6	32·3	36·5	− 2·5	0	39	5	0·19	−0·61	*	*
	Stornoway	46	23	41·6	30·7	36·2	− 3·5	0	41	1	0·05	−0·88	18	26
	Wick	44	28	40·7	31·9	36·3	− 2·7	0	40	4	0·13	−0·37	*	*
	Lairg ℌ	43	20	38·0	26·0	32·0	− 5·5	0	70	3	0·13	−0·65	*	*
	Glencarron ℌ	39	18	36·6	26·4	31·5	− 6·4	0	74	1	0·04†	?	?	?
	Fort Augustus ℌ	42	19	38·8	27·8	33·3	− 5·6	0	61	1	0·19†	?	*	*
1. SCOTLAND, E.	Nairn	42	23	37·9	27·7	32·8	− 6·7	0	64	3	0·20	−0·21	*	*
	Aberdeen	40	29	37·9	32·1	35·0	− 3·9	0	49	4	0·24	−0·37	7	10
	Braemar ℌ	38	22	34·7	27·1	30·9	− 4·4	0	78	2	0·03	−0·73	7‡	10‡
	Ochtertyre ℌ												*	*
	Leith	41	32	37·6	32·7	35·2	− 4·9	0	48	4	0·26	−0·11	*	*
	Marchmont ℌ	37	28	35·3	30·4	32·9	− 4·9	0	64	5	0·57	−0·02	0	0
2. ENGLAND, N.E.	Alnwick Castle	37	32	35·3	32·9	34·1	− 5·0	0	54	5	0·47	−0·11	*	*
	Durham	36	29	34·6	30·4	32·5	− 6·8	0	67	6	0·35	−0·10	0	0
	Shields	38	31	36·3	32·3	34·3	− 5·7	0	54	4	0·26	−0·14	*	*
	Scarborough ℌ	38	28	35·7	30·8	33·3	− 6·5	0	61	3	0·37	−0·07	3‡	4‡
	York	39	28	36·3	30·1	33·2	− 6·8	0	62	4	0·29	−0·16	3	4
	Spurn Head	40	27	36·4	30·7	33·6	− 6·2	0	59	2	0·17	?	*	*
3. ENGLAND, E.	Hillington ℌ	36	18	33·7	26·0	29·9	−10·3	0	85	3	0·21	−0·24	10	14
	Yarmouth	35	24	32·6	27·7	30·2	−10·8	0	83	3	0·21	−0·29	*	*
	Geldeston	36	22	33·2	27·2	30·2	−10·9	0	83	1	0·13	−0·27	3	4
	Cambridge	37	18	34·3	25·3	29·8	−11·0	0	85	1	0·10	−0·28	6	8
	Rothamsted	35	18	32·1	24·4	28·3	−12·4	0	96	1	0·03	−0·50	*	*
	Ingatestone	36	19	32·3	25·6	29·0	−12·5	0	91	1	0·05	−0·33	8‡	11‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	41	22	36·7	29·1	32·9	− 8·0	0	64	2	0·22	−0·18	2‡	3‡
	Loughborough	38	17	34·6	27·3	31·0	− 9·8	0	77	5	0·21	−0·27	*	*
	Leicester	38	20	34·1	27·2	30·7	− 9·9	0	79	0	—	−0·48	4	6
	Cheadle ℌ	37	22	33·3	26·9	30·1	− 9·7	0	83	4	0·20	−0·47	*	*
	Churchstoke ℌ	36	18	32·8	26·3	29·6	−11·0	0	87	2	0·10	−0·54	2	3
	Hereford ℌ	38	23	34·5	27·8	31·2	−10·3	0	76	2	0·03	−0·55	*	*
	Cirencester	36	19	32·9	25·0	29·0	−11·5	0	91	1	0·02	−0·62	9	12
	Oxford	35	18	32·7	25·7	29·2	−12·0	0	90	3	0·19	−0·29	4	5
5. ENGLAND, S.	London	37	22	33·4	27·3	30·4	−11·6	0	81	3	0·08	−0·37	6‡	8‡
	Strathfield Turgiss ℌ	37	20	33·6	25·1	29·4	−12·6	0	88	1	0·25	−0·25	*	*
	Dungeness	37	22	33·7	27·1	30·4	−12·2	0	81	1	0·04	−0·47	*	*
	Hastings (St. Leonard's)	36	19	33·3	26·3	29·8	−12·6	0	85	5	0·67	+0·19	15	21
	Southampton	40	21	35·6	27·1	31·4	−10·6	0	74	3	0·03	−0·64	15	21
	Hurst Castle	38	26	35·3	28·7	32·0	−11·0	0	70	0	—	−0·58	*	*
	Stowell ℌ	35	19	32·1	25·1	28·6	−13·1	0	94	2	0·06	?	15‡	21‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	42	26	39·1	29·3	34·2	− 5·9	0	55	0	— †	−2·08	*	*
	Glasgow	39	32	37·6	33·2	35·4	− 4·5	0	46	2	0·05	−0·76	4	6
	Ardrossan	41	31	37·7	32·6	35·2	− 4·7	0	48	2	0·03	−0·77	*	*
	Glenlee ℌ	40	27	37·3	30·7	34·0	− 4·5	0	56	0	—	?	*	*
	Douglas (Isle of Man)	40	31	37·8	32·4	35·1	− 6·8	0	48	1	0·01	−0·83	18	25
7. ENGLAND, N.W.	Newton Reigny (Penrith)	38	22	35·6	26·7	31·2	− 7·8	0	76	2	0·03	−0·67	11	15
	Barrow-in-Furness	41	28	38·1	30·7	34·4	− 7·4	0	53	2	0·03	−0·62	*	*
	Stonyhurst	38	27	35·0	29·2	32·1	− 7·9	0	69	1	0·01	−0·90	13	18
	Blackpool ℌ	39	27	36·5	29·7	33·1	− 8·6	0	62	4	0·04	−0·55	15	21
	Manchester	37	26	34·2	29·8	32·0	− 8·9	0	70	4	0·11	−0·47	*	*
	Liverpool Obsr (Bidston)	37	27	35·0	29·9	32·5	− 9·0	0	67	2	0·05	−0·38	*	*
	Llandudno ℌ	40	30	37·3	31·8	34·6	− 8·2	0	52	2	0·04	−0·50	10	14
	Holyhead	39	28	37·1	31·9	34·5	− 8·6	0	53	5	0·09	−0·53	*	*
8. ENGLAND, S.W.	Llandovery	39	24	36·0	27·6	31·8	−10·8	0	71	1	0·02	−1·06	*	*
	Pembroke	39	27	36·1	29·6	32·9	−11·1	0	64	1	0·01	−0·74	18	25
	Arlington (N. Devon)	37	21	32·7	26·0	29·4	−12·6	0	88	3	0·26	−0·89	*	*
	Cullompton ℌ	38	21	34·0	27·2	30·6	−11·8	0	80	2	0·04	−0·76	14	19
	Falmouth	41	24	36·5	29·2	32·9	−11·3	0	64	0	—	−1·00	20	27
	Plymouth	40	23	36·5	28·5	32·5	−11·5	0	67	0	—	−0·78	17	23
	Prawle Point	41	21	35·6	26·3	31·0	−12·5	0	77	3	0·05	?	*	*
9. IRELAND, N.	Malin Head	41	31	38·0	34·0	36·0	− 4·9	0	42	2	0·03	?	*	*
	Londonderry	44	28	39·6	32·0	35·8	− 5·2	0	43	2	0·05	−0·64	*	*
	Mullaghmore	44	33	39·1	33·9	36·5	− 4·8	0	39	0	—	−0·85	*	*
	Belmullet	44	30	39·3	32·4	35·9	− 7·7	0	43	1	0·03	?	*	*
	Markree Castle	46	20	38·6	27·9	33·3	− 7·4	0	61	0	—	−0·65	10	14
	Brookeborough	45	27	37·3	28·5	32·9	− 7·0	0	64	0	—	?	*	*
	Armagh	45	27	39·1	30·4	34·8	− 6·8	0	50	1	0·03	−0·57	11	15
	Donaghadee	43	33	38·7	34·4	36·6	− 5·1	0	38	3	0·03	−0·57	*	*
	Edgeworthstown	48	28	38·7	29·7	34·2	− 6·1	0	55	1	0·04	−0·76	*	*
10. IRELAND, S.	Dublin	41	32	38·3	33·8	36·1	− 6·4	0	41	4	0·59	+0·01	5	7
	Parsonstown	42	24	37·7	29·0	33·4	− 8·3	0	60	1	0·03	−0·54	8	11
	Kilkenny	39	26	37·1	30·3	33·7	− 8·0	0	58	0	—	−0·68	*	*
	Waterford	41	27	38·3	30·9	34·6	− 9·4	0	52	2	0·09	−0·75	*	*
	Roche's Point	41	28	39·3	31·4	35·4	− 8·8	0	46	0	—	−1·03	*	*
	Valencia	44	25	41·1	32·9	37·0	− 8·4	0	35	1	0·01	−1·19	36	49
	Killarney	42	17	38·8	26·9	32·9	−11·0	0	64	0	—	?	*	*
	Foynes	43	28	38·8	33·5	36·2	− 6·0	0	41	0	—	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	41	29	39·0	32·9	36·0	−10·0	0	42	2	0·14	−0·55	*	*
	Jersey (Noirmont)	40	21	36·6	30·3	33·5	− 9·2	0	60	3	0·54	−0·11	6	8

Stations marked ℌ are in connection with the Royal Meteorological Society, and those marked ℌ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 9.] *Second Series.* WEEK ENDING MONDAY, 5TH MARCH, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

DISTRICTS. (See p. 36.)	Observed during the Week. Highest.	Observed during the Week. Lowest.	Averages of Daily Maxima.	Averages of Daily Minima.	Averages of Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	For the Week. Difference from Mean.	For the Week. Below 42°	For the Week. Difference from Mean.	From January 3, 1888. Above 42°.	From January 3, 1888. Difference from Mean.	From January 3, 1888. Below 42°.	From January 3, 1888. Difference from Mean.
	°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	48	18	40·2	29·2	34·6	4 below.	0	− 9	52	+22	39	− 22	391	+107
1. SCOTLAND, EAST	49	17	40·0	29·0	34·4	4 below.	0	−14	53	+22	44	− 36	378	+ 41
2. ENGLAND, N.E.	45	26	39·1	31·1	35·0	5 below.	0	−14	49	+21	36	− 45	333	+ 30
3. ENGLAND, EAST	45	21	37·3	27·8	32·4	8 below.	0	−18	67	+39	34	− 66	424	+107
4. MIDLAND COUNTIES	48	18	38·6	27·6	33·0	8 below.	0	−20	63	+35	43	− 72	426	+116
5. ENGLAND, SOUTH	48	20	38·3	27·3	32·6	10 below.	0	−22	66	+45	42	− 82	406	+164
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	47	18	41·8	29·8	35·7	4 below.	0	−14	44	+20	52	− 41	292	+ 43
7. ENGLAND, N.W.	45	20	39·8	30·5	35·0	6 below.	0	−14	49	+28	30	− 62	307	+ 61
8. ENGLAND, S.W.	49	20	40·2	28·6	34·3	9 below.	0	−23	54	+41	58	−116	333	+189
9. IRELAND NORTH	52	19	43·3	30·8	36·9	4 below.	4	−14	39	+19	81	− 48	235	+ 20
10. IRELAND, SOUTH	53	22	43·1	31·2	37·1	6 below.	3	−23	38	+25	108	− 89	208	+ 65
— CHANNEL ISLANDS	47	28	40·8	33·2	36·9	8 below.	0	−26	36	+31	102	−102	177	+108

Rainfall. Bright Sunshine.

DISTRICTS. (See p. 36.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
		10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	4	3	5 less.	42	− 2	6·7	−2·4	22	30	105	+12	20	+ 2
1. SCOTLAND, EAST	4	1	4 less.	35	+ 3	3·8	−1·5	16	22	127	− 9	24	− 2
2. ENGLAND, N.E.	3	1	4 less.	29	− 4	2·3	−1·9	27	36	117	+28	21	+ 5
3. ENGLAND, EAST	3	1	4 less.	28	− 7	2·4	−1·9	25	33	125	+ 6	22	+ 1
4. MIDLAND COUNTIES	2	1	4 less.	24 *	−10	1·9	−3·2	21	28	116	+ 9	20	+ 1
5. ENGLAND, SOUTH	3	1	4 less.	25	− 9	2·5	−2·8	20	27	111	+ 2	19	0
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	1	1	7 less.	27	−13	5·4	−4·1	28	37	138	+47	25	+ 8
7. ENGLAND, N.W.	3	less than ½	6 less.	32	− 4	2·3	−4·0	30	40	130	+33	23	+ 5
8. ENGLAND, S.W.	2	1	8 less.	29	− 9	3·1	−5·8	27	35	153	+31	23	+ 5
9. IRELAND, NORTH	2	1	6 less.	29	−13	3·8	−2·8	16	21	118	+ 7	21	+ 1
10. IRELAND, SOUTH	3	1	7 less.	25	−16	3·9	−4·3	23	30	147	+18	26	+ 3
— CHANNEL ISLANDS	2	1	6 less.	38	− 3	3·6	−3·1	25	33	139	−29	23	− 5

General Remarks.

Weather has been fairer generally than that reported of late, although a good deal of cloud has prevailed in most districts.

Temperature has continued below the mean in all parts of the Kingdom, but at the end of the period the thermometer was rising briskly. Over Scotland the deficit has been 4° and over Ireland between 4° and 6°, but in most parts of England it has been between 5° and 9°, and in "England, S." as much as 10°. The highest of the maxima, which were generally recorded on the 5th March, ranged from 45° over the east and north of England to 53° in "Ireland, S." The lowest of the minima, which were registered on rather irregular dates, varied from 17° to 18° in Scotland, from 19° to 22° in Ireland, and from 18° to 26° over England.

Rainfall has been very considerably less than the mean in all districts.

Bright sunshine shows a decided increase on that recorded last week, the percentage of the possible amount of duration ranging from 21 in "Ireland, N." and 22 in "Scotland, E." to 37 in "Scotland, W." and 40 in "England, N.W."

Depressions observed.—The barometer continued high and uniform over our Islands and their immediate neighbourhood during nearly the whole of the period, while depressions were shown both over Scandinavia and the Spanish Peninsula. Towards the close of the week, however, the high pressure area moved southwards to the Bay of Biscay, and depressions began to approach our north-western and northern coasts from the Atlantic. Easterly breezes of moderate strength were again prevalent over the United Kingdom until March 2nd, when light or moderate winds from the Northward or North-Westward became general.

* This value has been altered owing to the receipt of further information.

A 53575. 350.—3/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

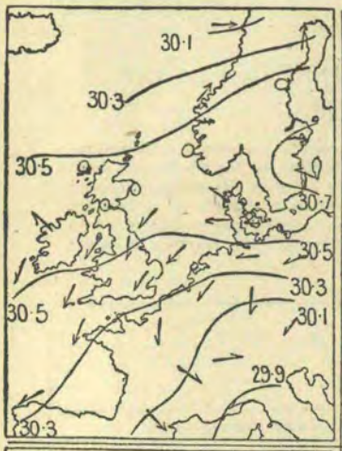
Weather

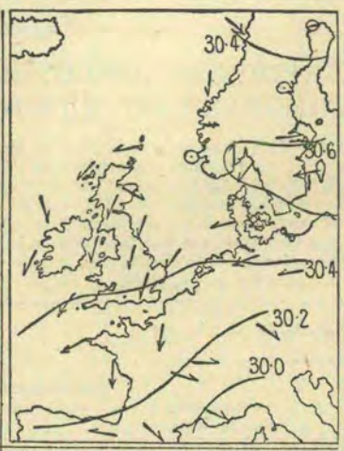
During the 24 hours succeeding 8 a.m. on the dates given.

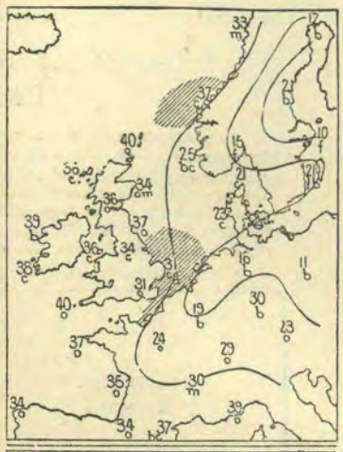
Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.







Tuesday, February 28.

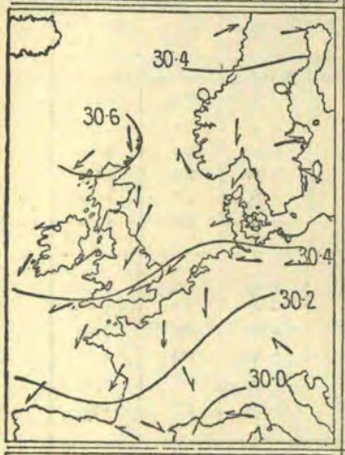
Weather fair generally, but cloudy in many localities, especially over France and the east of Great Britain.

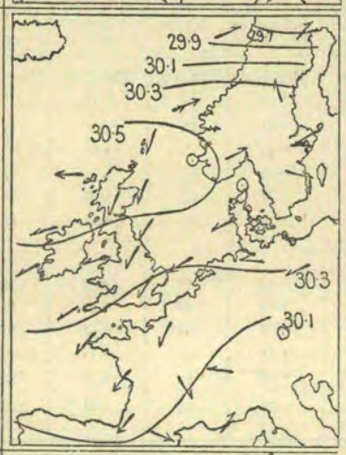
Temperature risen several degrees in the west of France and slightly in the south-west of our Islands, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 40° at Sumburgh Head and Scilly to 29° at Wick. Maxima below 40° at all but our western and extreme northern stations.

Wind South-Westerly or Westerly in the extreme north, but Easterly or North-Easterly elsewhere; fresh in force in many parts of England and France.

Sea rather rough off the east and south-east of England.

Barometer rising at all but the Scandinavian stations. Broad anticyclonic band stretching from the Baltic to the north-west of our Islands, with a depression over the north of Norway, and other disturbances over South Germany and the Gulf of Genoa. Depressions subsequently disappearing, but barometer falling slightly on our western coasts.





Wednesday, February 29.

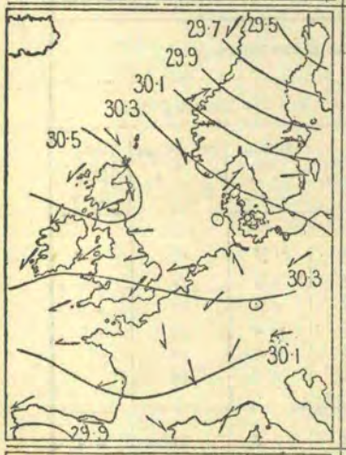
Weather fine in Scandinavia, Denmark, and North Germany, but cloudy elsewhere, with snow or sleet showers in many parts of our Islands as well as in Belgium and the north of France.

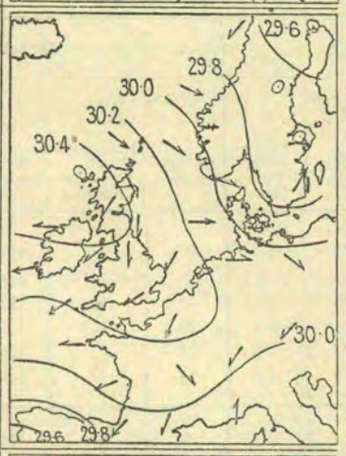
Temperature risen several degrees in the north of Scotland, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 39° at Stornoway and Wick to 29° at Prawle Point and Oxford. Maxima below 40° at all but our western and northern stations.

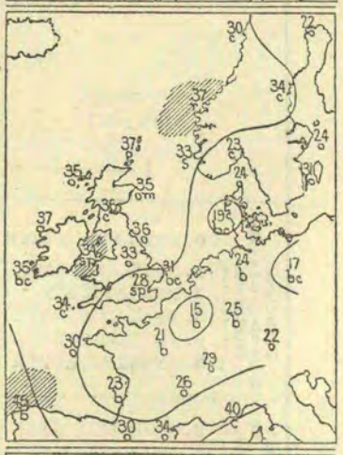
Wind Westerly in the north of Scandinavia, but Easterly or North-Easterly elsewhere; fresh in force at several of the English and French stations.

Sea rather rough off the south-east of England.

Barometer falling at all our more central stations, but rising elsewhere. Anticyclone lying off the north of Scotland, with relatively low pressures over the north of Scandinavia and the south of France. Fall taking place generally later.







Thursday, March 1.

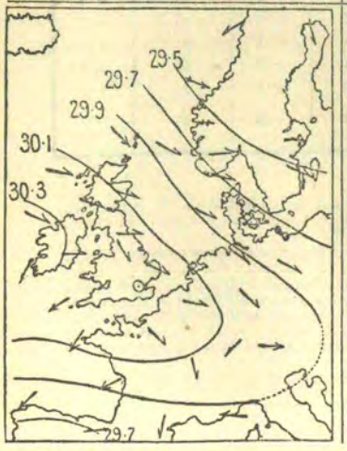
Weather fine at several of the German and French stations, but cloudy elsewhere, with snow in many parts of England, and sleet in the west of Norway. Improvement taking place over England later.

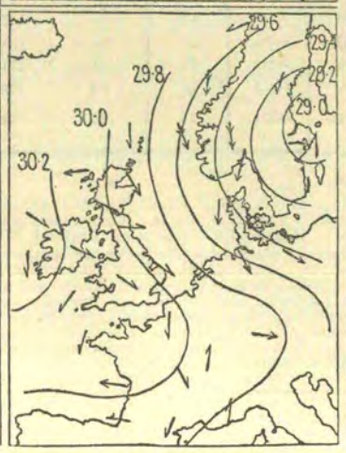
Temperature risen several degrees in Sweden, but changed irregularly elsewhere; readings over our Islands ranging at 8 a.m. from 38° at Malin Head to 26° at Oxford. Sharp frost occurring over England at night.

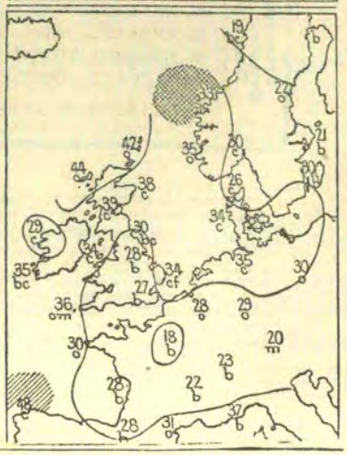
Wind Westerly in Scandinavia and the extreme north of Scotland, with a gale at Christiansund, but Easterly or North-Easterly elsewhere; moderate or fresh in force generally.

Sea rough at Christiansund and rather so at Holyhead, but moderate to smooth elsewhere.

Barometer falling generally. Anticyclone lying over Scotland, with a rather deep depression over the north of Sweden, and another over the south of Spain. No important change later.







Friday, March 2.

Weather dull in Scandinavia, Germany, and the north of Scotland, but fair or fine elsewhere. Snow showers falling later at many of our northern stations.

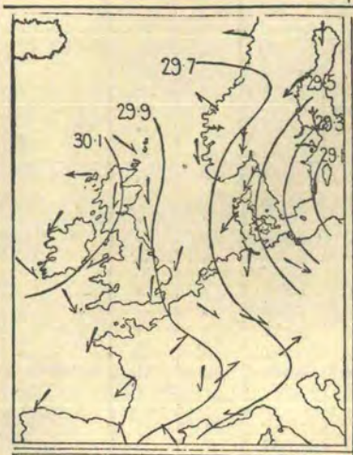
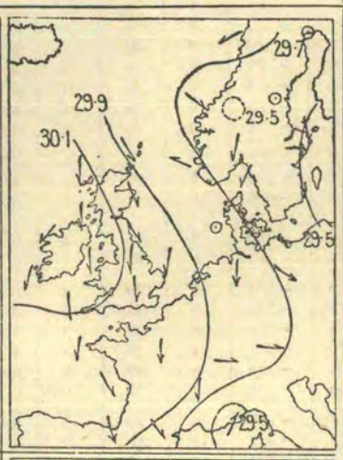
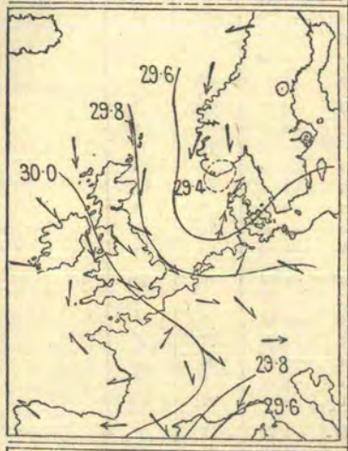
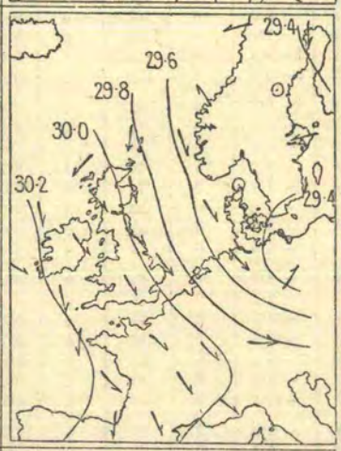
Temperature risen slightly in Scotland and several degrees in North Germany, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 44° at Stornoway to 36° at Parsonstown and 22° at Oxford. Brisk rise taking place over England later.

Wind North-Westerly over the North Sea, Germany, and the north and east of Great Britain, but still Easterly or North-Easterly on our southern and the French coasts; strong in force over the Bay of Biscay. Subsequently increasing to a gale from the northward on the eastern shores of the North Sea.

Sea rough on the Norwegian coasts, but moderate or slight elsewhere.

Barometer falling generally. Anticyclone now lying over Ireland, with a depression over Spain, and a large area of low pressure over the north of Scandinavia. Latter disturbance subsequently growing deeper and moving south-eastwards.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Saturday, March 3.** *Weather* fine in many places, but snow showers reported in several parts of Great Britain as well as in the south of Sweden, Germany, and the north of France. *Temperature* risen several degrees in France and the south of our Islands, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 43° at Scilly to 30° in the Shetlands. Frost occurring in most places at night. *Wind* chiefly Northerly; strong to a gale in force over the south of Sweden and north of Denmark, but moderate or fresh elsewhere. Gale subsiding later. *Sea* rough on several parts of our north and east coasts. *Barometer* rising in Scandinavia, Denmark, and the north of our Islands, but falling elsewhere. Anticyclone lying over Ireland and the west of Scotland, and large depression over the Baltic. Depression subsequently moving away south-eastwards, but new disturbance forming over Norway in evening.	
		**Sunday, March 4.** *Weather* fine in Sweden, Germany, and the greater part of France, but cloudy elsewhere, with snow showers at several of our northern stations. Snow showers extending later to our eastern and south-eastern coasts. *Temperature* risen a little in Norway, Denmark, and the north of our Islands, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 41° at Scilly to 29° in the Shetlands. *Wind* moderate Northerly or North-Westerly in our Islands, but South-Westerly in Denmark and Easterly in the west of France. Northerly and North-Westerly breezes subsequently becoming general. *Sea* rather rough at Christiansund and Shields, but moderate to smooth elsewhere. *Barometer* falling at all but the French and German stations. Areas of high pressure lying over the south of Ireland and the west of France, with a large and complex depression over Scandinavia and Denmark. Depression subsequently moving south-eastwards, and barometer rising in north.	
		Monday, March 5. *Weather* dull and unsettled on our extreme west and north-west coasts, but fair or fine in most other localities. Slight showers falling later in many parts of the United Kingdom. *Temperature* fallen a few degrees in Scotland, but risen in France and Germany; readings over our Islands ranging at 8 a.m. from 44° at Scilly to 25° at Dungeness. Brisk rise taking place over England later. *Wind* South-Westerly on our extreme western coasts, but North-Westerly or Northerly elsewhere; light moderate in force generally. *Sea* moderate to smooth on nearly all coasts. *Barometer* rising at all but our extreme western and northern stations. Anticyclone lying over the Bay of Biscay and the west of France, with low pressures over the Baltic and Gulf of Bothnia. Depression subsequently appearing off the north of Scotland.	

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇛ = a heavy gale; ➤ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 33 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ♓	43	26	38·4	31·4	34·8	− 4·1	0	50	5	0·20	−0·57	*	*
	Stornoway ♓	47	28	42·7	32·0	37·2	− 2·5	2	34	3	0·26	−0·64	22	30
	Wick ♓	45	27	39·6	30·1	34·7	− 4·2	0	51	6	0·26	−0·22	*	*
	Lairg ♓	46	18	40·0	27·6	33·6	− 4·0	0	59	1	0·04	−0·70	*	*
	Glencarron ♓	44	22	39·1	27·0	32·9	− 4·7	0	64	6	0·65†	?	?	?
	Fort Augustus ♓	48	21	41·6	?27·2	?34·2	?− 4·4	0	?55	3	0·07†	?	*	*
1. SCOTLAND, E.	Nairn ♓	44	21	40·9	27·7	34·1	− 5·6	0	55	5	0·20	−0·20	*	*
	Aberdeen ♓	45	31	40·3	32·0	36·0	− 2·9	0	42	5	0·17	−0·43	19	26
	Braemar ♓	40	17	36·7	24·4	30·4	− 5·0	0	81	5	0·08	−0·58	11‡	15‡
	Ochtertyre ♓												*	*
	Leith ♓	49	28	43·0	31·7	37·2	− 3·0	3	36	2	0·11	−0·24	*	*
	Marchmont ♓	43	26	39·1	29·3	34·1	− 3·7	0	55	2	0·14	−0·40	19	26
2. ENGLAND, N.E.	Alnwick Castle	43	29	38·4	31·6	34·9	− 4·3	0	50	2	0·04	−0·48	*	*
	Durham	44	28	38·9	30·4	34·5	− 4·8	0	53	3	0·03	−0·43	24	32
	Shields	44	28	39·9	31·0	35·3	− 4·6	0	47	3	0·08	−0·30	*	*
	Scarborough ♓	43	28	38·7	30·8	34·6	− 5·1	0	52	4	0·12	−0·30	30‡	40‡
	York	45	26	40·4	30·6	35·4	− 4·5	0	46	2	0·02	−0·41	28	37
	Spurn Head	40	31	38·1	32·0	35·0	− 4·8	0	49	4	0·13	?	*	*
3. ENGLAND, E.	Hillington ♓	42	21	38·5	27·6	32·9	− 7·1	0	64	3	0·04	−0·38	27	36
	Yarmouth	39	27	35·6	29·0	32·2	− 8·7	0	69	3	0·13	−0·35	*	*
	Geldeston	41	24	37·5	27·7	32·5	− 8·4	0	67	4	0·10	−0·28	23	30
	Cambridge	45	23	40·3	26·9	33·4	− 7·4	0	60	2	0·04	−0·33	27	36
	Rothamsted	41	26	?35·4	?28·1	?31·7	?− 9·1	0	?72	2	0·02	−0·47	*	*
	Ingatestone	40	24	?36·4	27·2	?31·7	?− 9·9	0	?72	2	0·08	−0·27	22‡	29‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	43	28	39·4	30·0	34·6	− 6·2	0	52	1	0·04	−0·35	19‡	25‡
	Loughborough	45	27	40·4	29·4	34·7	− 6·1	0	51	1	0·02	−0·39	*	*
	Leicester	48	28	39·6	30·2	34·8	− 5·6	0	50	0	—	−0·43	14	19
	Cheadle ♓	42	23	37·2	27·1	32·0	− 7·7	0	70	4	0·14	−0·44	*	*
	Churchstoke ♓	47	18	38·5	25·4	31·8	− 8·7	0	71	2	0·05	−0·48	24	32
	Hereford ♓	48	25	39·9	28·7	34·1	− 7·2	0	55	3	0·05	−0·44	*	*
	Cirencester	41	19	36·6	24·1	30·2	−10·5	0	83	2	0·06	−0·49	23	30
	Oxford	42	21	37·1	26·1	31·4	− 9·8	0	74	2	0·07	−0·33	26	34
5. ENGLAND, S.	London	44	25	38·4	27·9	33·0	− 8·8	0	63	2	0·05	−0·34	10‡	13‡
	Strathfield Turgiss ♓	44	20	39·0	26·6	32·6	− 9·2	0	66	2	0·03	−0·37	*	*
	Dungeness	41	24	37·0	26·9	31·8	−11·1	0	71	2	0·08	−0·41	*	*
	Hastings (St. Leonard's)	42	22	37·0	27·8	32·3	−10·1	0	68	6	0·14	−0·33	23	30
	Southampton	48	23	41·0	27·4	34·0	− 8·1	0	56	2	0·03	−0·56	26	34
	Hurst Castle	44	24	38·6	28·0	33·1	− 9·7	0	62	2	0·04	−0·47	*	*
	Stowell ♓	44	21	37·2	26·2	31·5	−10·3	0	74	3	0·11	?	22‡	29‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	45	26	42·6	29·9	36·1	− 3·9	2	42	3	0·26†	−1·72	*	*
	Glasgow	47	26	41·8	31·1	36·3	− 3·5	0	40	0	—	−0·70	21	28
	Ardrossan	45	25	41·4	30·7	35·9	− 4·1	0	43	1	0·02	−0·69	*	*
	Glenlee ♓	45	18	41·5	?25·4	?33·2	?− 5·5	0	?62	1	0·10	?	*	*
	Douglas (Isle of Man)	45	27	41·9	32·0	36·8	− 5·1	0	36	2	0·04	−0·72	34	45
7. ENGLAND, N.W.	Newton Reigny (Penrith)	43	20	39·3	25·1	32·0	− 6·9	0	70	3	0·06	−0·58	28	38
	Barrow-in-Furness	45	30	42·0	31·6	36·7	− 5·2	0	37	1	0·02	−0·60	*	*
	Stonyhurst	41	29	38·9	32·6	35·7	− 4·1	0	44	5	0·05	−0·82	36	48
	Blackpool ♓	43	29	40·5	30·1	35·2	− 6·5	0	48	2	0·02	−0·51	28	37
	Manchester	43	25	38·4	29·1	33·6	− 7·2	0	59	3	0·06	−0·49	*	*
	Liverpool Obsy (Bidston)	43	28	38·7	30·6	34·5	− 6·9	0	53	2	0·02	−0·40	*	*
	Llandudno ♓	45	26	40·1	31·2	35·5	− 7·4	0	46	2	0·04	−0·45	27	36
	Holyhead	45	30	40·4	33·6	36·9	− 6·3	0	36	3	0·03	−0·51	*	*
8. ENGLAND, S.W.	Llandovery	46	20	41·1	25·6	33·1	− 9·5	0	62	2	0·04	−0·96	*	*
	Pembroke	44	26	39·9	30·3	35·0	− 9·1	0	49	2	0·06	−0·63	28	37
	Arlington (N. Devon)	43	22	37·0	26·7	31·7	−10·1	0	72	3	0·13	−0·86	*	*
	Cullompton ♓	48	23	39·7	28·2	33·8	− 8·5	0	57	3	0·03	−0·69	22	29
	Falmouth	47	27	41·2	32·2	36·6	− 7·8	0	38	1	0·11	−0·76	25	33
	Plymouth	46	25	41·5	29·0	35·1	− 8·8	0	48	1	0·02	−0·67	31	41
	Prawle Point	49	24	41·1	28·4	34·6	− 8·8	0	52	2	0·02	?	*	*
9. IRELAND, N.	Malin Head	46	33	42·6	36·1	39·3	− 1·6	2	21	3	0·05	?	*	*
	Londonderry	47	29	44·9	32·1	38·3	− 2·5	8	35	3	0·12	−0·53	*	*
	Mullaghmore	48	29	43·9	32·7	38·1	− 3·3	5	32	3	0·11	−0·68	*	*
	Belmullet	48	27	44·0	32·7	38·2	− 5·7	6	33	4	0·29	?	*	*
	Markree Castle	48	20	43·3	26·0	34·3	− 6·5	4	54	2	0·09	−0·52	18	24
	Brookeborough	48	19	42·4	26·7	34·3	− 5·5	1	52	0	—	?	*	*
	Armagh	47	24	42·6	29·3	35·8	− 5·9	2	44	1	0·01	−0·53	13	17
	Donaghadee	52	29	43·1	33·9	38·4	− 3·5	3	28	2	0·05	−0·47	*	*
	Edgeworthstown	46	21	42·6	27·9	35·0	− 5·2	2	48	1	0·04	−0·71	*	*
10. IRELAND, S.	Dublin	47	28	41·6	33·4	37·4	− 5·0	0	32	2	0·08	−0·43	13	17
	Parsonstown	49	22	42·6	26·9	34·6	− 7·2	2	52	3	0·04	−0·50	16	21
	Kilkenny	47	25	41·3	30·4	35·7	− 6·1	0	44	2	0·08	−0·52	*	*
	Waterford	49	27	42·7	30·7	36·5	− 7·3	2	39	3	0·07	−0·68	*	*
	Roche's Point	50	30	43·3	32·0	37·7	− 6·6	4	36	3	0·08	−0·85	*	*
	Valencia	53	31	45·9	32·6	39·1	− 6·2	11	35	4	0·20	−0·89	40	53
	Killarney	49	26	43·6	28·7	35·9	− 7·9	4	46	3	0·06	?	*	*
	Foynes	48	29	44·1	35·2	39·5	− 2·9	6	24	2	0·08	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	47	31	42·1	34·3	38·1	− 7·8	0	26	2	0·04	−0·56	*	*
	Jersey (Noirmont)	47	28	39·4	32·0	35·6	− 7·2	0	45	2	0·05	−0·55	25	33

Stations marked ♓ are in connection with the Royal Meteorological Society, and those marked ♓ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office Victoria Street.

NOTE.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 10.] *Second Series.* WEEK ENDING MONDAY, 12TH MARCH, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 40.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	53	26	43·7	34·2	38·8	0 (average).	5	− 6	27	− 4	44	− 27	418	+104
	1. SCOTLAND, EAST	56	25	45 7	35·3	40·3	2 above.	10	− 5	25	− 7	54	− 49	493	+ 43
	2. ENGLAND, N.E.	58	27	47·4	38·1	42·6	3 above.	21	+ 6	11	−17	57	− 49	344	+ 20
	3. ENGLAND, EAST	57	27	48·8	38·3	43·4	3 above.	25	+ 5	10	−19	50	− 71	434	+ 96
	4. MIDLAND COUNTIES	61	29	49·2	38·9	43·9	3 above.	19	− 3	9	−19	62	− 83	435	+104
	5. ENGLAND, SOUTH	61	24	48·3	38·6	43·4	1 above.	24	0	10	−12	66	− 90	416	+158
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	53	28	45·9	39·0	42·3	2 above.	15	0	8	−15	67	− 46	300	+ 36
	7. ENGLAND, N.W.	56	28	46·3	39·1	42·6	1 above.	16	+ 1	8	−14	46	− 67	315	+ 54
	8. ENGLAND, S.W.	56	29	49·1	39·9	44·4	1 above.	26	+ 2	6	− 8	84	−120	339	+184
	9. IRELAND NORTH	57	30	48·1	39·8	43·8	2 above.	22	+ 3	6	−15	103	− 52	241	+ 11
	10. IRELAND, SOUTH	59	30	51·0	40·5	45·6	2 above.	32	+ 5	4	−10	140	− 90	212	+ 58
	— CHANNEL ISLANDS	54	37	50·5	42·7	46·5	2 above.	32	+ 5	0	− 5	134	−105	177	+103

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 40.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	6	18	7 more.	48	− 2	8 5	−1·4	13	17	118	+ 4	20	+ 1
	1. SCOTLAND, EAST	6	11	6 more.	41	+ 5	4·9	−0·9	8	11	135	−23	22	− 4
	2. ENGLAND, N.E.	5	7	3 more.	34	− 2	3·0	−1·6	18	24	135	+23	21	+ 4
	3. ENGLAND, EAST	5	10	7 more.	33	− 5	3·4	−1·3	13	16	138	− 5	21	− 1
	4. MIDLAND COUNTIES	5	9	5 more.	29	− 8	2·8	−2·7	12	15	123	− 1	20	0
	5. ENGLAND, SOUTH	5	10	6 more.	30	− 6	3·5	−2·2	12	15	123	− 7	19	− 1
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	6	19	12 more.	33	−12	7·3	−2·8	11	14	140	+36	24	+ 6
	7. ENGLAND, N.W.	6	12	6 more.	38	− 2	3·5	−3·4	7	8	137	+22	21	+ 3
	8. ENGLAND, S.W.	6	17	10 more.	35	− 7	4·8	−4·8	20	25	173	+23	21	+ 3
	9. IRELAND, NORTH	6	15	9 more.	35	−12	5·3	−1·9	5	7	123	− 7	19	− 2
	10. IRELAND, SOUTH	5	19	12 more.	30	−15	5·8	−3·1	18	23	165	+10	25	+ 1
	— CHANNEL ISLANDS	7	12	7 more.	45	− 1	4·8	−2·4	27	34	166	−28	25	− 4

General Remarks.

Weather has been in a very unsettled, rainy, and changeable condition in all parts of our Islands. At the end of the period it had become cold again, and snow or sleet was falling at all our more northern stations.

Temperature has about equalled the mean for the season in "Scotland, N.", but in all other districts an excess of from 1° to 3° is shown. The highest of the maxima, which were recorded on somewhat irregular dates, ranged from 53° to 56° in Scotland, from 57° to 59° in Ireland, and from 56° to 61° over England. The lowest of the minima were registered either on the 6th or 12th, when the thermometer fell to between 24° and 29° in the "Wheat-producing" districts, and 28° and 39° in the "Grazing" districts; in the "Channel Islands" the lowest reading was 37°.

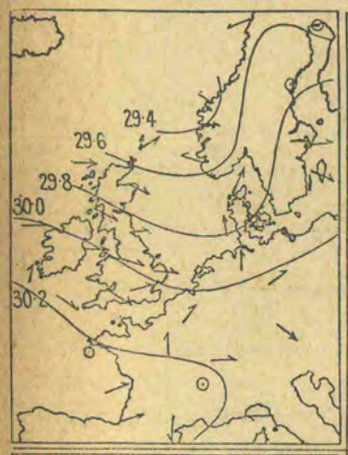
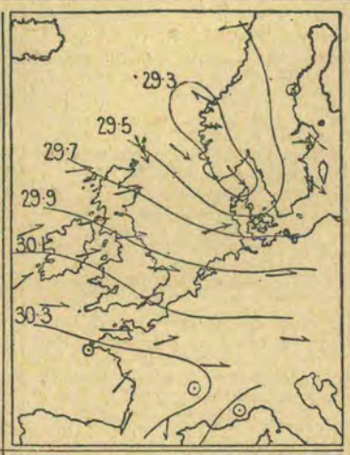
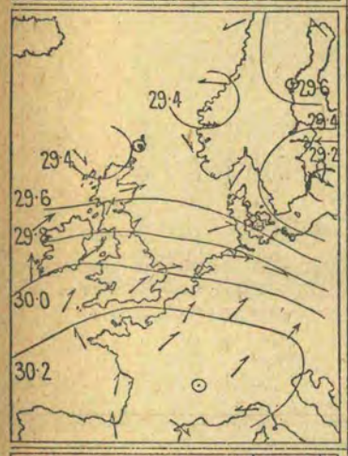
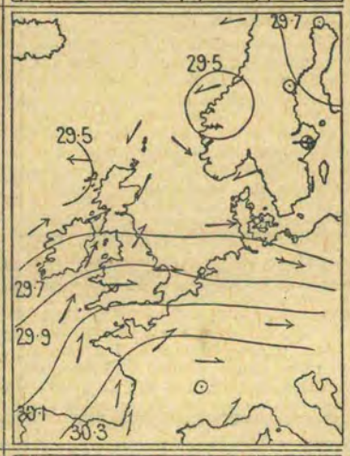
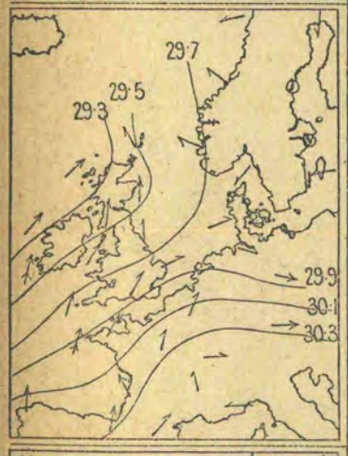
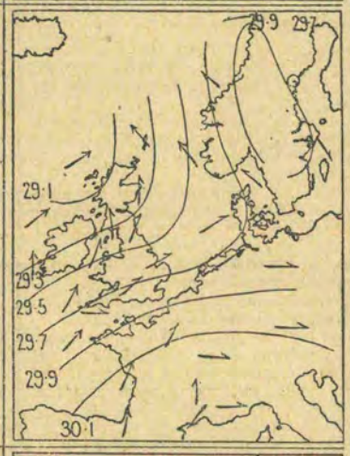
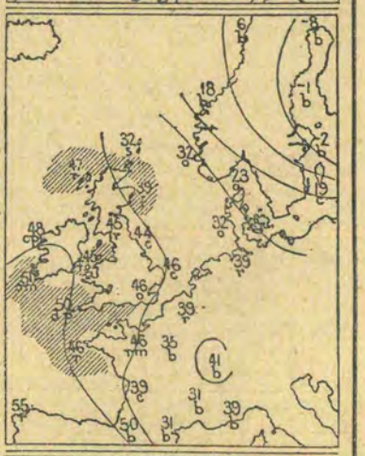
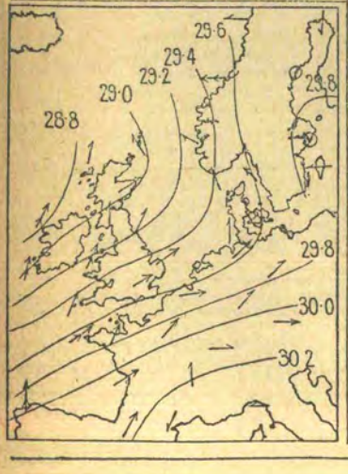
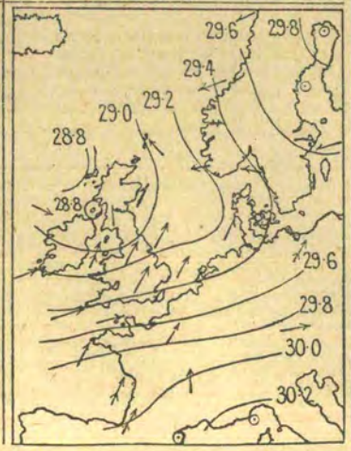
Rainfall has been more than the mean in all districts, the excess in nearly every case being considerable. The amount of rain which has fallen during the week over the country generally has been greater than any recorded since the week ending 7th November 1887.

Bright sunshine has been less prevalent than it was last week in all districts, the percentage of the possible amount of duration ranging from 7 in "Ireland, N." and 8 in "England, N.W.", to 25 in "England, S.W." and 34 in the "Channel Islands".

Depressions observed.—The distribution of barometric pressure over our Islands was cyclonic, and depressions either skirted our Atlantic coasts or moved in an easterly direction over the more northern parts of the Kingdom. Under these conditions strong South-Westerly winds or gales were very general over our Islands. During the night of the 10th—11th, however, a small but deep and well defined disturbance was developed off our south-west coasts, and travelling rather quickly eastwards over central England, caused strong South-Westerly gales at all our southern stations, and gales or strong winds from the Eastward in the north and north-east. Over Ireland and the south-west of England strong North-Westerly to Northerly gales were experienced in the rear of the depression. At the close of the period the system had reached North Germany and had become much less deep, but a new disturbance was appearing off the south of Ireland.

A 23031. 350.—3/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, March 6.** *Weather* fair generally, but showery at several of our western and northern stations. Showers extending later to some parts of our southern districts. *Temperature* risen generally; readings over our Islands ranging at 8 a.m. from 47° at Belmullet and Scilly to 35° at Dungeness. Subsequently rising above 50° at some of our western stations. *Wind* moderate Westerly over our Islands and France, but Southerly or South-Easterly on the eastern shores of the North Sea. Subsequently increasing to moderate gale in the north of Scotland. *Sea* moderate to smooth. *Barometer* falling over Great Britain and the eastern shores of the North Sea, but rising elsewhere. Large anticyclone lying over Spain, the Bay of Biscay, and the south of France, with a depression off the west of Norway. New disturbance forming later over the Skager Rack.	
		**Wednesday, March 7.** *Weather* fine in France and the south of our Islands as well as at some of the Continental stations, but cloudy elsewhere, with rain in Scotland and snow in the south of Sweden. Rain falling later in many parts of our Islands. *Temperature* risen at all but the extreme northern stations; readings over our Islands ranging at 8 a.m. from 50° at Valencia to 36° at Wick and Dungeness and 31° in the Shetlands. *Wind* Easterly in the north of Scandinavia, but Westerly or South-Westerly in most other localities; strong in force at some of our western stations. Subsequently shifting to North-East in the east of Scotland. *Sea* rather rough on our western coasts. *Barometer* rising in France and the north of Scandinavia, but falling elsewhere. Anticyclone still lying over Spain and the south of France, with depressions over the north of Scotland, the west of Norway, and the Island of Gothland. Depressions partially filling up later.	
		**Thursday, March 8.** *Weather* fine over Scandinavia and the greater part of France, but cloudy elsewhere, with sleet in the north of Scotland, and rain at several of our western and south-western stations. Rain falling generally later. *Temperature* fallen over Scandinavia and central Scotland, but risen elsewhere; readings over our Islands ranging at 8 a.m. from 51° at Valencia to 32° in the Shetlands. Subsequently rising above 55° at some of our northern and central stations. *Wind* chiefly Southerly or South-Westerly, but South-Easterly in the north of Scotland and west of Norway; strong in force in the west, south, and north of our Islands. *Sea* rough on our south-western, western, and extreme northern coasts. *Barometer* falling in our Islands and France, but rising elsewhere Anticyclone still lying over Spain and the south of France, and depressions moving northwards along our extreme western coasts. Fall subsequently becoming general.	
		**Friday, March 9.** *Weather* fair over Scandinavia and the central parts of our Islands, but cloudy or overcast elsewhere, with rain in many places. Rain falling generally later. *Temperature* risen at most stations; readings over our Islands ranging at 8 a.m. from 52° at Valencia and Cambridge to 41° in the Shetlands. *Wind* Easterly in Norway, but Southerly or South-Westerly elsewhere; strong to a gale in force on all our western and southern coasts. Subsequently veering to the westward in Ireland. *Sea* high or rough in the west, south, and extreme north, but moderate in the east. *Barometer* falling generally. Pressure highest in the south of France, and relatively high over the Baltic, with a large depression off our extreme western coasts. Secondary disturbance appearing later off the south-west of Scotland, but barometer beginning to rise quickly in Ireland.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

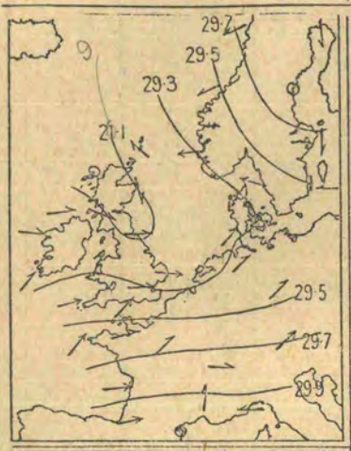
Weather

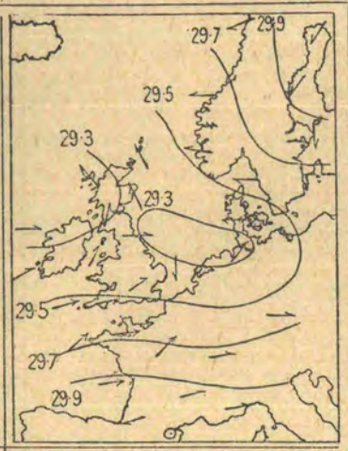
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Saturday, March 10.

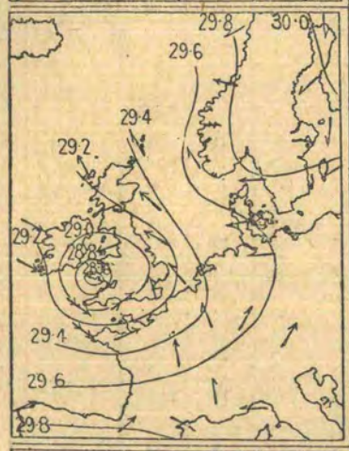
Weather cloudy generally, with showers in many parts of our Islands, and steady rain in South Germany and the east of France.

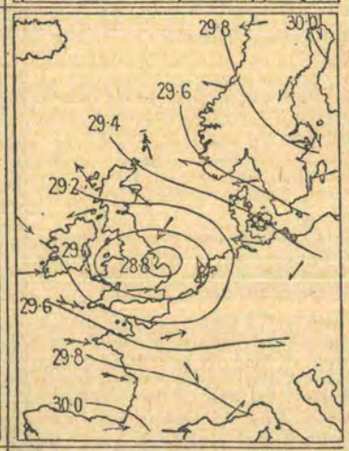
Temperature fallen in our Islands and France, but risen in Sweden and Germany; readings over the United Kingdom ranging at 8 a.m. from 49° at Valencia and Scilly to 37° in the Shetlands.

Wind Easterly in Norway and South-Easterly in the north of Scotland, but South-Westerly or Westerly elsewhere; strong to a gale in force over the Channel and Bay of Biscay.

Sea high or rough on our south-western, southern, and extreme northern coasts.

Barometer rising in our Islands and the north of Scandinavia, but falling elsewhere. Pressure highest over Spain and relatively high in the north of Sweden, with a shallow depression over Scotland and the north-east of England. Slight fall taking place in west of Ireland later.





Sunday, March 11.

Weather fine in Scandinavia, but cloudy or overcast elsewhere, with rain in Ireland, Scotland, the west and north of England and the west of Spain. Rain extending to our eastern stations later.

Temperature fallen generally; readings over our Islands varying at 8 a.m. from 48° at Jersey to 35° at Sumburgh Head and Aberdeen. Fall continuing all day.

Wind Westerly over the Bay of Biscay and mouth of the Channel, Southerly in the south-east of England, South-Easterly or Easterly on our eastern and northern coasts, and North-Westerly in Ireland; strong in force generally, with a severe gale in the south-west. Heavy Westerly gale experienced later on all our southern coasts, and slight Easterly gale in the north.

Sea high or rough generally.

Barometer falling at all but our northern stations. Pressure high both in Sweden and Spain, with a deep depression over South Wales. Depression subsequently moving steadily in an east-north-easterly direction, and barometer rising again in west and south-west.

Monday, March 12.

Weather dull and unsettled in the north and east of our Islands, with snow in many places, but fair in most other localities. Snow falling in Germany and the south of Sweden.

Temperature fallen generally; readings over our Islands ranging at 8 a.m. from 45° at Scilly to 30° at Nairn and Leith. Sharp frost occurring in the north of Scotland at night.

Wind strong from East or North-East in all the more northern countries, but fresh from the Westward in the south. Subsequently freshening from East in Ireland.

Sea high on our north-east coasts, and rough excepting in the north-west and extreme west.

Barometer rising in our Islands and France, but falling elsewhere. Pressure highest over the Gulf of Bothnia, but also high in Spain. Deep depression of previous day passing away over Holland and Germany, but new disturbance appearing off the south of Ireland. Slight fall taking place in south-west later.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇛ = a heavy gale; ⟹ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	44	29	39·9	31·7	35·7	− 3·2	0	44	7	0·37	−0·34	*	*
	Stornoway	49	31	45·9	37·4	41·5	+ 1·6	11	18	6	1·52	+0·62	13	17
	Wick	50	30	42·7	33·9	38·2	− 0·7	2	28	7	1·04	+0·57	*	*
	Lairg ℳ	53	26	42·9	31·7	37·1	− 0·8	3	35	7	1·83	+1·13	*	*
	Glencarron ℳ	50	28	44·1	34·6	39·2	+ 1·6	6	26	5	4·16†	?	?	?
	Fort Augustus ℳ	50	31	46·4	36·1	41·1	+ 2·5	12	23	5	1·78†	?	*	*
1. SCOTLAND, E.	Nairn	56	29	46·6	33·9	40·1	+ 0·3	13	31	6	1·25	+0·86	*	*
	Aberdeen	54	29	45·9	35·3	40·4	+ 1·5	11	25	5	1·34	+0·80	9	12
	Braemar ℳ	50	25	43·7	31·8	37·6	+ 2·3	5	36	6	1·33	+0·73	6‡	8‡
	Ochtertyre ℳ												*	*
	Leith	56	29	48·1	38·4	43·1	+ 2·2	23	10	7	0·75	+0·43	*	*
	Marchmont ℳ	52	26	44·3	37·0	40·5	+ 2·7	6	18	7	0·79	+0·28	10	13
2. ENGLAND, N.E.	Alnwick Castle	54	30	46·0	38·3	42·0	+ 2·6	11	10	5	0·62	+0·12	*	*
	Durham	56	27	47·8	37·5	42·5	+ 3·0	22	13	5	0·88	+0·41	18	23
	Shields	58	30	48·3	38·6	43·3	+ 3·2	23	10	5	0·43	+0·07	*	*
	Scarborough ℳ	56	30	48·0	38·4	43·1	+ 3·4	23	10	5	0·98	+0·57	16‡	21‡
	York	58	27	49·4	37·9	43·5	+ 3·3	28	11	5	0·68	+0·28	21	27
	Spurn Head	52	32	44·9	37·7	41·2	+ 1·2	8	16	5	0·64	?	*	*
3. ENGLAND, E.	Hillington ℳ	55	28	48·9	37·9	43·3	+ 3·2	26	11	6	1·04	+0·66	11	14
	Yarmouth	55	31	46·7	37·7	42·1	+ 1·2	19	12	4	1·31	+0·87	*	*
	Geldeston	57	30	49·8	38·7	44·1	+ 3·2	29	9	4	1·03	+0·67	17	22
	Cambridge	56	27	50·3	38·3	44·1	+ 3·3	30	10	4	0·99	+0·67	13	16
	Rothamsted	54	31	48·2	38·1	43·0	+ 2·0	23	11	6	1·05	+0·64	*	*
	Ingatestone	56	31	48·6	39·1	43·7	+ 1·9	24	8	5	0·84	+0·52	9‡	11‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	61	29	49·1	39·6	44·2	+ 3·4	25	7	4	0·68	+0·31	13‡	16‡
	Loughborough	56	30	49·1	39·7	44·3	+ 3·5	26	6	5	0·72	+0·37	*	*
	Leicester	56	31	50·0	?37·5	?43·6	?+ 3·1	?30	?13	4	0·63	+0·27	11	14
	Cheadle ℳ	54	29	48·2	37·1	42·5	+ 2·7	24	14	6	0·95	+0·43	*	*
	Churchstoke ℳ	56	29	49·1	37·8	43·3	+ 2·6	27	12	5	0·96	+0·49	19	24
	Hereford ℳ	58	34	50·9	40·4	45·6	+ 4·3	32	4	6	0·76	+0·36	*	*
	Cirencester	53	32	48·0	39·1	43·4	+ 2·4	22	8	6	1·32	+0·84	8	10
	Oxford	54	31	49·0	40·1	44·4	+ 2·8	25	5	4	1·04	+0·68	10	13
5. ENGLAND, S.	London	56	32	49·7	39·6	44·5	+ 2·6	28	7	4	0·60	+0·27	6‡	8‡
	Strathfield Turgiss ℳ	61	32	51·9	39·9	45·7	+ 3·8	35	6	5	0·94	+0·60	*	*
	Dungeness	46	24	44·7	36·0	40·2	− 2·8	8	22	5	0·81	+0·38	*	*
	Hastings (St. Leonard's)	49	32	46·9	37·9	42·3	− 0·2	19	11	5	1·27	+0·84	10	13
	Southampton	55	33	50·3	39·8	44·9	+ 2·4	30	6	5	1·34	+0·86	16	20
	Hurst Castle	50	32	46·9	38·7	42·7	− 0·3	19	9	6	1·34	+0·89	*	*
	Stowell ℳ	53	32	48·0	38·6	43·2	+ 1·4	23	10	5	0·97	?	14‡	18‡
6. SCOTLAND, W.	Laudale (Loch Sunart)										†		*	*
	Glasgow	53	30	46·5	39·3	42·8	+ 2·7	17	8	6	1·69	+1·09	8	10
	Ardrossan	50	28	45·0	38·1	41·5	+ 1·2	8	15	4	1·82	+1·21	*	*
	Glenlee ℳ	52	30	47·1	38·6	42·7	+ 4·4	19	10	6	1·90	?	*	*
	Douglas (Isle of Man)	51	32	44·8	40·0	42·3	+ 0·4	11	6	6	2·10	+1·41	14	18
7. ENGLAND, N.W.	Newton Reigny (Penrith)	50	28	44·9	37·1	40·9	+ 1·4	8	18	7	0·99	+0·41	4	5
	Barrow-in-Furness	48	31	44·1	38·7	41·3	− 0·6	6	12	6	1·34	+0·76	*	*
	Stonyhurst	54	29	46·2	38·0	42·0	+ 1·7	12	11	6	1·65	+0·84	4	5
	Blackpool ℳ	49	31	44·7	38·8	41·7	− 0·3	8	13	7	1·16	+0·66	11	14
	Manchester	54	31	48·2	38·6	43·3	+ 2·3	23	10	6	1·09	+0·54	*	*
	Liverpool Obsy (Bidston)	55	31	47·7	40·4	43·9	+ 2·1	20	4	5	0·79	+0·39	*	*
	Llandudno ℳ	56	32	48·2	40·0	44·0	+ 1·0	22	6	6	1·20	+0·75	7	9
	Holyhead	49	34	46·0	40·9	43·4	0·0	14	3	7	1·31	+0·81	*	*
8. ENGLAND, S.W.	Llandovery	52	30	49·3	38·1	43·5	+ 0·7	27	11	6	3·22	+2·34	*	*
	Pembroke	48	39	46·0	42·3	44·1	− 0·3	15	0	6	0·94	+0·33	25	32
	Arlington (N. Devon)	51	34	48·0	38·7	43·2	+ 1·4	22	9	5	2·18	+1·33	*	*
	Cullompton ℳ	56	29	51·9	39·8	45·7	+ 3·1	35	6	5	1·52	+0·91	17	22
	Falmouth	52	38	50·5	42·1	46·3	+ 1·7	30	0	7	1·84	+1·05	22	28
	Plymouth	56	32	50·3	40·7	45·4	+ 1·3	29	4	6	1·76	+1·16	14	18
	Prawle Point	49	32	47·6	37·3	42·3	− 1·3	22	13	6	0·73	?	*	*
9. IRELAND, N.	Malin Head	51	34	45·9	41·0	43·4	+ 2·4	14	3	6	1·21	?	*	*
	Londonderry	57	31	49·4	41·2	45·2	+ 4·3	26	2	6	1·38	+0·74	*	*
	Mullaghmore	53	34	48·4	41·3	43·8	+ 2·0	16	2	4	2·16	+1·44	*	*
	Belmullet	51	36	47·6	43·3	45·4	+ 1·0	24	0	6	0·61	?	*	*
	Markree Castle	54	32	48·7	38·7	43·6	+ 2·3	25	9	5	1·93	+1·35	7	9
	Brookeborough	51	30	46·6	37·5	41·9	+ 1·9	13	18	?	?	?	*	*
	Armagh	54	32	49·2	38·8	43·9	+ 2·1	27	9	6	1·54	+1·04	3	4
	Donaghadee	53	31	48·1	39·6	43·7	+ 1·3	22	7	7	1·25	+0·77	*	*
	Edgeworthstown	54	30	49·0	37·1	42·9	+ 2·6	27	14	5	2·16	+1·47	*	*
10. IRELAND, S.	Dublin	55	33	51·8	40·5	46·0	+ 3·5	34	4	5	1·97	+1·39	17	22
	Parsonstown	57	32	50·7	39·0	44·7	+ 2·7	32	8	5	1·57	+1·04	15	19
	Kilkenny	57	32	50·6	39·1	44·7	+ 2·9	31	8	5	1·27	+0·72	*	*
	Waterford	54	30	49·4	38·4	43·7	− 0·2	27	10	5	1·61	+0·91	*	*
	Roche's Point	53	35	49·7	41·4	45·4	+ 1·0	23	2	6	2·72	+1·87	*	*
	Valencia	54	36	51·9	42·9	47·3	+ 2·0	37	0	6	1·52	+0·52	21	27
	Killarney	54	30	52·2	40·8	46·3	+ 2·3	35	3	6	3·13	?	*	*
	Foynes	55	35	51·5	41·8	46·5	+ 3·7	32	1	5	1·40	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	54	37	51·0	43·0	46·9	+ 0·7	34	0	7	0·99	+0·44	*	*
	Jersey (Noirmont)	52	39	50·0	42·3	46·0	+ 2·9	28	0	6	1·47	+0·92	27	34

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office Victoria Street.

NOTE.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 11.] *Second Series.* WEEK ENDING MONDAY, 19TH MARCH, 1888. [*Price 4d.* [*Annual subscription post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 44.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	51	12	38·3	26·9	32·4	7 below.	0	− 9	67	+35	44	− 40	485	+143
	1. SCOTLAND, EAST	47	2	35·0	25·1	30·4	9 below.	0	−16	81	+49	54	− 67	484	+ 93
	2. ENGLAND, N.E.	42	26	35·1	23·4	32·2	8 below.	0	−16	69	+42	57	− 70	413	+ 62
	3. ENGLAND, EAST	53	26	37·9	29·5	33·4	8 below.	0	−22	60	+32	59	−102	494	+127
	4. MIDLAND COUNTIES	50	26	38·3	29·6	33·8	7 below.	0	−24	57	+30	62	−114	492	+133
	5. ENGLAND, SOUTH	52	28	40·5	32·0	36·1	7 below.	0	−26	41	+20	66	−120	457	+176
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	47	19	37·4	27·9	32·5	8 below.	0	−16	67	+45	68 *	− 64	366 *	+ 80
	7. ENGLAND, N.W.	43	25	36·5	29·4	32·9	9 below.	0	−17	64	+43	46	− 89	379	+ 99
	8. ENGLAND, S.W.	52	23	42·2	31·0	36·4	7 below.	1	−24	37	+23	85	−149	376	+207
	9. IRELAND NORTH	50	21	40·4	29·9	35·1	7 below.	0	−20	48	+27	103	− 76	289	+ 39
	10. IRELAND, SOUTH	53	22	44·0	31·7	37·7	6 below.	6	−22	36	+22	146	−113	248	+ 80
	— CHANNEL ISLANDS	53	30	43·8	37·4	40·5	5 below.	5	−23	17	+12	139	−134	194	+115

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 44.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	3	1	5 less.	51	− 3	8·6	−2·4	37	46	155	+25	23	+ 4
	1. SCOTLAND, EAST	3	3	1 less.	44	+ 5	5·2	−1·1	18	22	153	−34	22	− 5
	2. ENGLAND, N.E.	4	8	4 more.	38	− 1	3·8	−1·2	8	10	143	+ 3	20	0
	3. ENGLAND, EAST	5	4	1 more.	38	− 2	3·8	−1·1	9	11	147	−31	20	− 5
	4. MIDLAND COUNTIES	4	5	2 more.	33	− 5	3·3	−2·5	13	16	141	−19	19	− 3
	5. ENGLAND, SOUTH	5	8	4 more.	35	− 3	4·3	−1·8	12	14	135	−29	18	− 5
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	2	2	3 less.	34 *	−14	7·7 *	−3·2	26	31	175	+39	25	+ 6
	7. ENGLAND, N.W.	3	4	1 less.	41	− 2	3·9	−3·5	19	23	156	+15	22	+ 2
	8. ENGLAND, S.W.	3	6	0 (average).	38	− 6	5·4	−4·9	35	42	208	+25	28	+ 3
	9. IRELAND, NORTH	2	3	3 less.	37	−14	5·7 *	−2·1	21	26	144	−13	20	− 2
	10. IRELAND, SOUTH	3	6	1 less.	33	−15	6·4	−3·2	28	34	193	+ 9	26	+ 1
	— CHANNEL ISLANDS	5	7	2 more.	50	+ 2	5·5	−2·3	14	17	180	−62	24	− 8

General Remarks.

Weather has been fairer than of late over the greater part of Scotland, but over England and at most of the Irish stations the conditions have been very changeable and unsettled, with frequent falls of snow and sleet. In all the more eastern and south-eastern parts of England the falls of snow were very considerable.

Temperature has been below the mean in all districts, the deficit ranging from 5° in the "Channel Islands" and 6° in "Ireland, S.", to as much as 8° or 9° over the northern parts of England and the east and west of Scotland. The highest of the maxima, which were registered during the earlier days of the period over England, and towards its close in Ireland and Scotland, ranged from 42° in "England, N.E." to 53° in "England, E.", "Ireland, S.", and the "Channel Islands". On some days the maximum readings in many parts of Great Britain were very little above the freezing point. The lowest of the minima, which were recorded on irregular dates, were lower in Scotland than elsewhere. At Braemar the thermometer on the 17th fell to 2°, at Fort Augustus to 12°, and at Glenlee to 19°, while in Ireland the minima varied between 21° and 22°, and over England between 23° and 26°.

Rainfall has been less than the mean in Ireland and Scotland, but rather more over the greater part of England.

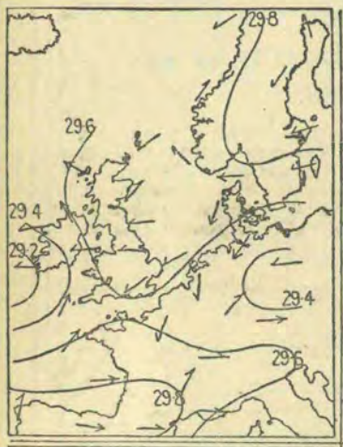
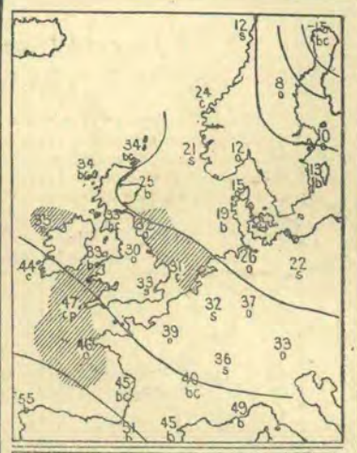
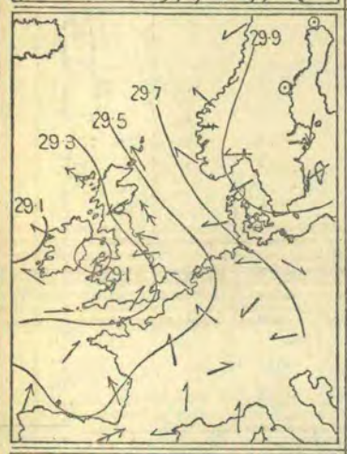
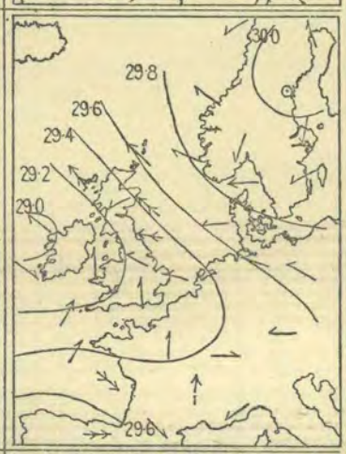
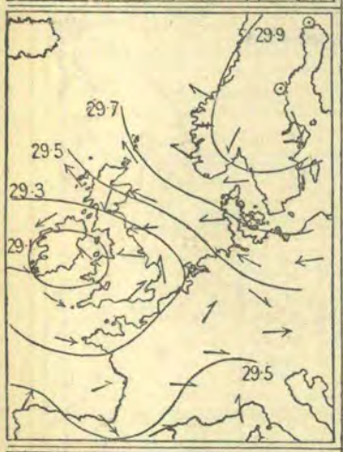
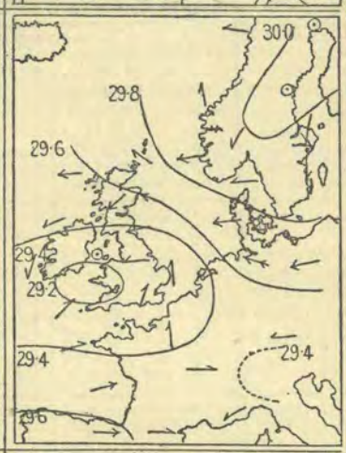
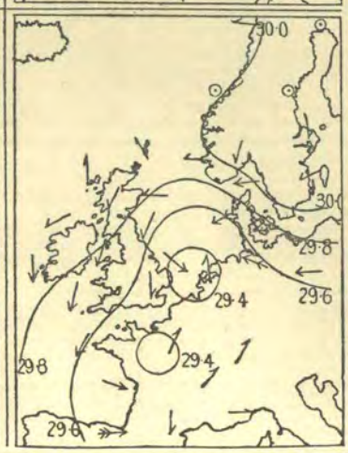
Bright sunshine shows a decided increase in Scotland, as well as in the south-west of England and over Ireland, but a general decrease elsewhere. The percentage of the possible amount of duration ranged from 10 to 16 over the greater part of England, to 34 in "Ireland, S.", 42 in "England, S.W.", and 46 in "Scotland, N." In the "Channel Islands" only 17 % was recorded.

Depressions observed.—During the greater part of this period the barometer has been highest over Scandinavia and relatively high over the Spanish Peninsula, while depressions have travelled eastwards and south-eastwards over the more southern parts of our Islands and the Netherlands. At the end of the period a rather deep disturbance was extending westwards towards our south-east coasts from central Germany. Under these conditions strong winds from between North and East were very general over the United Kingdom. At all our northern, eastern, and south-eastern stations fresh to strong gales were experienced, while the force of a gale was occasionally attained on most parts of our western coasts also.

* This value has been altered owing to the receipt of further information.

A 53740. 350.—3/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

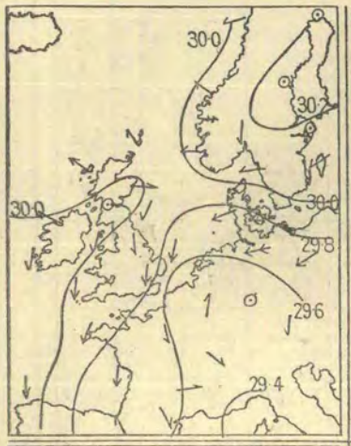
Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, March 13.** *Weather* fine in Scotland and the south of France, but cloudy elsewhere, with snow at several of the English and Continental stations, and showers of rain on our south-west coasts. *Temperature* risen a little in Scandinavia, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 47° at Scilly to 25° at Nairn and Aberdeen. Maxima below 40° at all our northern and eastern stations. *Wind* South-Westerly or Westerly over Spain, France, and the extreme south-west of England, but chiefly Easterly elsewhere; strong in force at many of our western stations. Subsequently increasing to strong breeze from South-East on our north and east coasts. *Sea* rough on our eastern and western coasts, but slight elsewhere. *Barometer* rising at all but our extreme south-western stations. Areas of high pressure lying respectively over Spain and the Gulf of Bothnia, with a shallow depression over Germany and a somewhat deeper disturbance off the south of Ireland. Latter system subsequently moving slowly north-eastwards.	
		**Wednesday, March 14.** *Weather* fair in Scandinavia, Denmark, and the south of our Islands, but dull and unsettled elsewhere, with snow in Germany, the north and east of England, and the west of Scotland. Rain falling at our southern stations later. *Temperature* fallen a little in Sweden and Germany, but risen elsewhere; readings over our Islands ranging at 8 a.m. from 45° at Scilly and Jersey to 31° at Shields and York. Subsequently rising above 50° at one or two of our southern stations. *Wind* strong to a gale from the South-Eastward in the north and east of our Islands; light from the same quarter on the eastern shores of the North Sea. Fresh South-Westerly on our southern coasts; southerly in France. *Sea* high in the north and east generally, and rough in the south-west. *Barometer* falling at all but the Scandinavian and German stations. Pressure highest over the north of Sweden, but relatively high in Spain, with a small depression over the Irish Sea and another off the west of Ireland. Former system subsequently filling up, but latter continuing to advance eastwards.	
		**Thursday, March 15.** *Weather* fair in Scandinavia and the south of our Islands, but dull and unsettled elsewhere, with snow over the north-eastern parts of Great Britain, and rain at some of the French stations. *Temperature* fallen in most places; readings over our Islands ranging at 8 a.m. from 42° at Jersey to 30° in the Shetlands. Thermometer subsequently rising above 50° at one or two of our southern stations. *Wind* strong to a gale from South-East or East on our north and north-east coasts, but moderate from West or South-West at our southern and the French stations. *Sea* still high on our north and north-east coasts, and rough at several of our western stations. *Barometer* falling at all but our western and northern stations. Pressure still highest over the north of Sweden and relatively high in Spain, with a well marked depression over Ireland and Wales. Depression subsequently moving slowly south-eastwards, and partially filling up.	
		**Friday, March 16.** *Weather* fine in Scandinavia and also at some of our south-western stations, but cloudy elsewhere, with snow in the north and east of England, and rain at Biarritz, Corunna, and Lisbon. *Temperature* fallen generally; readings over our Islands ranging at 8 a.m. from 41° at Scilly to 27° at Nairn. Maxima in the south-east of England about 15° lower than on previous day. *Wind* South-Westerly or Westerly in the south of France, but Easterly or North-Easterly elsewhere; strong in force at several of our northern stations. *Sea* still high off our north-east coasts, and rough in most other localities. *Barometer* rising at all but the Dutch and Western French stations. Pressure highest over the Gulf of Bothnia. Trough of low reading lying to the southward and south-eastward of our Islands, with a well defined depression over Holland, and another over the west of France. Depression gradually dispersing later.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

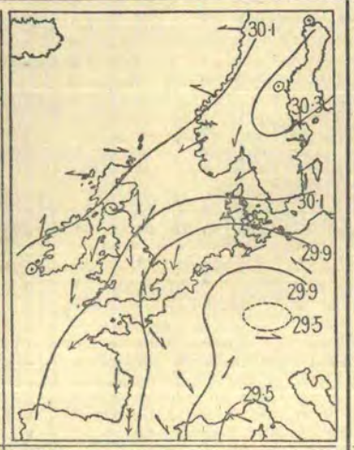
Synoptic Charts.

PRESSURE AND WIND.

8 a.m.



6 p.m.



Weather

During the 24 hours succeeding

8 a.m. on the dates given.

Saturday, March 17.

Weather fine in Scandinavia and the extreme south of France, but cloudy elsewhere, with snow in the Netherlands and many parts of England. Sky clearing later in west and north.

Temperature risen a little in Sweden, Denmark, and the north of Scotland, but fallen elsewhere ; readings over our Islands ranging at 8 a.m. from 39° at Scilly to 27° at Parsonstown and 26° at Leith.

Wind South-Easterly on our extreme north and north-west coasts and Easterly in Norway and Denmark, but Northerly elsewhere ; strong in force on our eastern, southern, and many of the French stations.

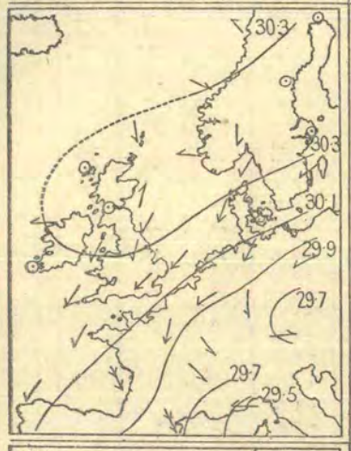
Sea rough off the east of England and rather rough on exposed parts of our western and extreme northern coasts.

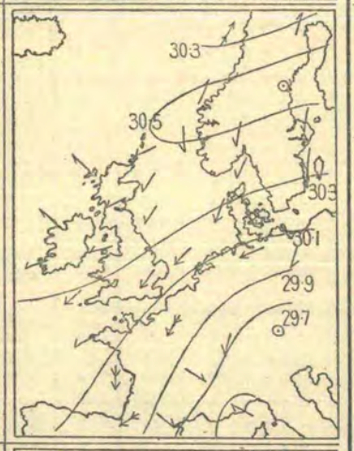
Barometer rising generally. Pressure highest in Sweden, but relatively high over Ireland and the south of Scotland, with a large area of low readings over the Netherlands, Germany, and the east of France. Low pressure system filling up later.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Sunday, March 18.

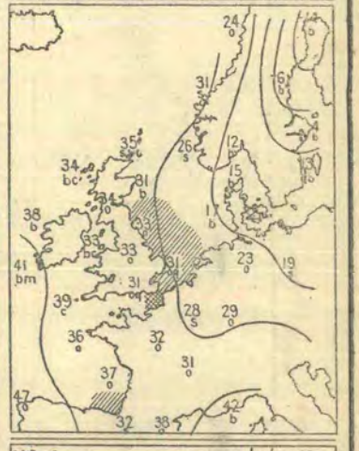
Weather fine in Sweden, Denmark, and the greater part of our Islands, but cloudy elsewhere, with snow in the west of Norway, the extreme south-east of England and many parts of Germany and France.

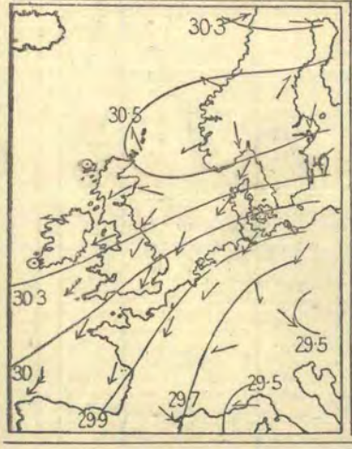
Temperature risen a little in the west and north of our Islands, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 41° at Valencia to 28° at Nairn. Maxima below 40° at all our eastern and southern stations.

Wind light and variable over Scandinavia and the north of our Islands, but fresh or strong from the North-Eastward elsewhere.

Sea rough on our east and south-east coasts.

Barometer rising generally. Broad anticyclonic band extending from Finland to the north and north-west of our Islands ; low pressure systems lying over Germany and the south-east of France. Slight fall taking place in France later.





Monday, March 19.

Weather fine in Scandinavia, Denmark, and all the more western and northern parts of our Islands, but cloudy elsewhere, with snow in nearly all parts of Germany, Belgium, and France. Snow extending to the south-east of England later.

Temperature risen rapidly in the north of Sweden, and slightly in the north of our Islands, but fallen elsewhere ; readings over the United Kingdom ranging at 8 a.m. from 38° at Donaghadee and Scilly to 27° at Parsonstown. Maxima below 35° in south-east of England.

Wind light South-Easterly on our extreme north and north-west coasts, but North-Easterly elsewhere, with gales in the east and south generally.

Sea rough or high in the south and east.

Barometer rising in Scandinavia and the west and north of our Islands, but falling elsewhere. Anticyclonic band extending from Finland to the north-east of Scotland, with depressions over Germany and the Gulf of Genoa. German depression subsequently extending westwards, and barometer falling generally.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°	°	Inches.	Inches.		
Week ending March 12	Laudale	59	32	48·5	41·5	44·9	+ 4·8	22	1	5	3·04	+ 1·24	*	*
" "	Brookeborough	—	—	—	—	—	—	—	—	6	2·08	?	*	*

III.—DATA from which the SUMMARY on page 41 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	42	27.	36·6	28·9	32·6	− 6·3	0	66	4	0·10	−0·56	*	*
	Stornoway	45	29	40·1	31·3	35·6	− 4·5	0	45	4	0·30	−0·58	37	46
	Wick	47	26	38·7	29·4	33·9	− 5·1	0	57	4	0·13	−0·31	*	*
	Lairg	51	19	37·1	22·9	29·8	− 8·8	0	85	3	0·19	−0·49	*	*
	Glencarron	47	20	38·5	24·4	31·2	− 7·4	0	76	0	— †	?	?	?
	Fort Augustus	46	12	39·0	24·4	31·5	− 7·7	0	74	1	0·01†	?	*	*
1. SCOTLAND, E.	Nairn	47	19	38·7	24·3	31·3	− 8·7	0	75	1	0·04	−0·35	*	*
	Aberdeen	44	24	37·4	27·0	32·1	− 7·0	0	69	3	0·14	−0·37	24	29
	Braemar	39	2	33·2	18·6	25·7	−10·5	0	114	3	0·52	−0·06	19‡	23‡
	Ochtertyre												*	*
	Leith	41	24	36·6	28·0	32·2	− 8·8	0	69	3	0·13	−0·18	*	*
	Marchmont	38	26	34·3	27·6	30·9	− 7·9	0	78	5	0·78	+0·26	11	13
2. ENGLAND, N.E.	Alnwick Castle	38	28	34·1	30·3	32·1	− 7·8	0	69	3	1·03	+0·54	*	*
	Durham	36	26	33·7	28·0	30·8	− 8·8	0	78	5	0·48	0·00	7	9
	Shields	38	26	34·9	28·7	31·7	− 8·6	0	72	4	0·88	+0·53	*	*
	Scarborough	38	28	34·7	29·5	32·0	− 8·1	0	70	5	0·86	+0·45	7‡	9‡
	York	39	28	36·6	29·3	32·8	− 7·9	0	64	5	1·17	+0·79	10	12
	Spurn Head	42	29	36·6	30·6	33·5	− 6·9	0	60	2	0·26	?	*	*
3. ENGLAND, E.	Hillington	48	27	37·5	28·9	33·0	− 7·3	0	63	6	0·31	−0·03	10	12
	Yarmouth	39	28	34·3	29·1	31·6	− 9·5	0	73	6	0·55	+0·15	*	*
	Geldeston	49	28	36·8	29·7	32·2	− 9·1	0	69	6	0·34	−0·01	7	9
	Cambridge	53	26	40·6	29·6	34·9	− 6·4	0	50	5	0·20	−0·10	12	15
	Rothamsted	50	27	38·9	29·4	34·0	− 7·3	0	56	4	0·39	+0·01	*	*
	Ingatestone	49	27	?39·5	30·1	?34·7	?− 7·1	0	?51	5	0·57	+0·27	6‡	7‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	38	28	35·9	30·1	32·9	− 8·3	0	64	4	0·58	+0·23	7‡	9‡
	Loughborough	46	28	38·6	29·9	34·1	− 7·0	0	55	4	0·35	+0·03	*	*
	Leicester	48	28	39·7	29·1	34·2	− 6·6	0	55	4	0·35	0·00	12	15
	Cheadle	43	26	36·2	27·3	31·6	− 8·2	0	73	4	0·68	+0·27	*	*
	Churchstoke	48	27	38·0	28·2	33·0	− 7·8	0	63	2	0·43	−0·01	15	18
	Hereford	50	29	39·8	30·4	35·0	− 6·8	0	49	3	0·81	+0·43	*	*
	Cirencester	46	28	38·4	30·3	34·2	− 7·4	0	55	5	0·65	+0·20	15	18
	Oxford	49	29	39·9	31·6	35·6	− 6·2	0	45	4	0·40	+0·05	16	20
5. ENGLAND, S.	London	52	28	41·1	33·4	37·1	− 5·4	0	34	5	0·82	+0·51	10‡	12‡
	Strathfield Turgiss	52	28	41·5	31·2	36·2	− 6·3	0	41	4	0·76	+0·44	*	*
	Dungeness	46	28	38·7	31·9	35·2	− 8·2	0	48	7	0·91	+0·49	*	*
	Hastings (St. Leonard's)	47	28	38·7	31·2	34·8	− 7·9	0	50	7	1·61	+1·19	6	7
	Southampton	52	29	42·3	32·2	37·1	− 6·0	1	33	4	0·68	+0·24	17	21
	Hurst Castle	48	30	40·9	33·6	37·1	− 6·6	0	34	4	0·27	−0·13	*	*
	Stowell	50	28	40·6	30·6	35·5	− 6·7	0	46	4	0·65	?	14‡	17‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	47	25	39·6	27·0	33·1	− 7·1	0	62	1	0·01†	−1·60	*	*
	Glasgow	39	22	36·4	27·8	32·0	− 8·6	0	70	3	0·13	−0·45	22	27
	Ardrossan	42	25	37·4	28·4	32·8	− 8·0	0	64	3	0·13	−0·45	*	*
	Glenlee	39	19	35·6	25·9	30·6	− 9·3	0	80	0	—	?	*	*
	Douglas (Isle of Man)	39	25	38·0	30·3	34·0	− 8·3	0	56	3	0·68	+0·03	29	35
7. ENGLAND, N.W.	Newton Reigny (Penrith)	36	25	33·5	26·4	29·9	−10·2	0	85	3	0·14	−0·57	18	22
	Barrow-in-Furness	39	28	36·1	29·1	32·5	−10·0	0	67	3	0·74	+0·20	*	*
	Stonyhurst	37	27	34·8	28·4	31·5	− 9·4	0	74	2	0·41	−0·37	20	24
	Blackpool	40	27	36·6	28·7	32·5	−10·1	0	67	3	0·42	−0·06	17	21
	Manchester	39	28	35·6	29·6	32·5	− 9·0	0	67	3	0·36	−0·18	*	*
	Liverpool Obsy (Bidston)	42	29	37·4	30·4	33·8	− 8·4	0	57	2	0·29	−0·09	*	*
	Llandudno	43	30	38·9	31·5	35·1	− 8·3	0	48	3	0·20	−0·25	21	26
	Holyhead	42	31	39·1	32·3	35·6	− 8·3	0	45	4	0·65	+0·15	*	*
8. ENGLAND, S.W.	Llandovery	46	26	41·0	28·9	34·8	− 8·0	0	50	3	0·76	+0·01	*	*
	Pembroke	44	30	41·0	32·4	36·6	− 8·1	0	38	3	0·77	+0·23	38	46
	Arlington (N. Devon)	47	26	40·0	28·6	34·1	− 8·1	0	55	4	0·68	−0·07	*	*
	Cullompton	51	29	42·4	30·9	36·5	− 6·3	1	38	3	0·59	+0·05	19	23
	Falmouth	52	28	43·2	34·2	38·6	− 6·3	3	27	3	0·77	+0·02	44	54
	Plymouth	50	29	43·9	32·5	38·0	− 6·6	5	33	2	0·26	−0·29	37	45
	Prawle Point	49	23	44·1	29·3	36·5	− 7·4	6	45	4	0·45	?	*	*
9. IRELAND, N.	Malin Head	44	29	38·6	30·6	34·5	− 6·9	0	53	3	0·09	?	*	*
	Londonderry	48	27	41·4	28·9	35·0	− 6·3	0	49	2	0·19	−0·44	*	*
	Mullaghmore	47	29	41·6	32·4	36·9	− 5·5	0	36	1	0·14	−0·53	*	*
	Belmullet	49	31	44·0	34·1	38·9	− 6·2	6	28	3	0·37	?	*	*
	Markree Castle	48	22	41·9	28·2	34·9	− 7·3	0	50	2	0·20	−0·35	23	28
	Brookeborough	43	21	38·0	28·2	33·0	− 7·6	0	63	3	0·35	?	*	*
	Armagh	42	23	38·3	28·4	34·2	− 7·8	0	55	3	0·20	−0·28	19	23
	Donaghadee	50	22	39·6	31·1	35·2	− 7·8	0	48	3	0·33	−0·12	*	*
	Edgeworthstown	42	22	39·9	27·4	33·5	− 7·3	0	60	2	0·42	−0·24	*	*
10. IRELAND, S.	Dublin	42	27	40·1	32·3	36·1	− 6·9	0	41	4	0·97	+0·51	18	22
	Parsonstown	48	24	42·4	30·7	36·4	− 6·0	1	39	3	0·52	−0·01	26	32
	Kilkenny	49	22	42·4	29·6	35·8	− 6·5	1	42	2	0·48	−0·02	*	*
	Waterford	48	24	43·6	31·1	37·2	− 7·2	4	38	2	0·75	+0·06	*	*
	Roche's Point	48	30	44·4	33·7	38·9	− 5·7	7	30	4	0·35	−0·49	*	*
	Valencia	53	28	47·4	33·7	40·4	− 5·2	15	32	3	0·31	−0·64	40	49
	Killarney	51	24	45·1	29·1	36·9	− 7·4	9	46	3	0·61	?	*	*
	Foynes	51	27	46·7	33·1	39·7	− 3·7	13	33	3	0·50	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	53	34	45·0	38·4	41·6	− 4·9	8	14	4	0·37	−0·17	*	*
	Jersey (Noirmont)	51	30	42·6	36·4	39·4	− 4·2	2	19	5	0·99	+0·47	14	17

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office Victoria Street.

NOTE.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 12.] *Second Series.* WEEK ENDING MONDAY, 26TH MARCH, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 48.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	48	18	40·8	29·4	34·9	5 below.	0	−11	50	+19	44	− 45	535	+156
	1. SCOTLAND, EAST	53	14	42·0	28·9	35·3	5 below.	0	−17	47	+18	54	− 77	531	+104
	2. ENGLAND, N.E.	50	25	42·1	31·3	36·6	5 below.	0	−17	37	+12	57	− 81	450	+ 66
	3. ENGLAND, EAST	49	24	41·7	30·4	35·9	6 below.	0	−25	43	+17	59	−120	537	+137
	4. MIDLAND COUNTIES	54	22	44·1	29·8	36·8	5 below.	6	−21	43	+18	68	−125	535	+143
	5. ENGLAND, SOUTH	49	25	43·1	31·9	37·4	7 below.	3	−26	35	+15	69	−140	492	+187
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	51	22	42·6	30·2	36·2	5 below.	2	−16	40	+20	70	− 77	406	+ 94
	7. ENGLAND, N.W.	54	16	43·3	31·5	37·2	6 below.	4	−16	36	+17	50	− 99	415	+109
	8. ENGLAND, S.W.	54	23	44·4	31·8	37·9	7 below.	7	−21	36	+22	92	−164	412	+227
	9. IRELAND NORTH	54	19	43·6	30·2	36·8	6 below.	4	−19	42	+23	107	− 90	331	+ 57
	10. IRELAND, SOUTH	54	22	46·0	31·2	38·4	6 below.	11	−20	39	+25	157	−128	287	+102
	— CHANNEL ISLANDS	51	30	44·3	35·6	39·8	6 below.	6	−25	23	+18	145	−151	217	+133

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 48.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	5	11	6 more.	56	− 3	9·7	−1·8	24	28	179	+21	23	+ 2
	1. SCOTLAND, EAST	6	9	4 more.	50	+ 7	6·1	−0·6	20	24	173	−51	22	− 7
	2. ENGLAND, N.E.	5	6	2 more.	43	+ 1	4·4	−1·0	31	36	174	+ 7	22	+ 1
	3. ENGLAND, EAST	6	9	6 more.	44	+ 1	4·7	−0·6	13	16	160	−51	20	− 6
	4. MIDLAND COUNTIES	5	7	3 more.	38	− 3	4·0	−2·2	17	21	158	−35	19	− 5
	5. ENGLAND, SOUTH	5	9	5 more.	40	− 1	5·2	−1·3	12	14	147	−52	18	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	4	6	1 less.	38	−14	8·3	−3·3	33	38	208	+44	26	+ 5
	7. ENGLAND, N.W.	5	6	1 more.	46	0	4·5	−3·4	33	39	189	+24	23	+ 2
	8. ENGLAND, S.W.	5	10	4 more.	43	− 4	6·4	−4·5	21	24	229	+ 5	28	+ 1
	9. IRELAND, NORTH	5	8	3 more.	42	−13	6·5	−1·8	24	27	168	−18	21	− 3
	10. IRELAND, SOUTH	4	5	2 less.	37	−15	6·9	−3·3	33	38	226	+11	28	+ 1
	— CHANNEL ISLANDS	6	10	5 more.	56	+ 4	6·5	−1·8	18	21	198	−84	24	−10

General Remarks.

Weather has been in a very unsettled and changeable condition generally. Heavy falls of cold rain, sleet, or snow have occurred in all districts, while towards the end of the period thunder and lightning were experienced at some of our southern stations.

Temperature has continued below the mean, the deficit being 5° over Scotland and between 5° and 7° over Ireland and England. The highest of the maxima, which were generally recorded either on the 21st or 22nd, ranged from 48° in "Scotland, N." to 54° over the central and western parts of England and in the south of Ireland. The lowest of the minima, which were registered on irregular dates, varied from 14° in "Scotland, E.", 16° in "England, N.W.", 18° in "Scotland, N.", and 19° in "Ireland, N.", to 25° in "England, N.E." and "Ireland, S.", and to 30° in the "Channel Islands".

Rainfall has been rather less than the mean in "Scotland, W." and "Ireland, S.", but more in all other districts.

Bright sunshine has been somewhat more prevalent in most places than it was last week, the percentage of the possible amount of duration ranging from 14 in "England, S." and 16 in "England, E." to 36 in "England, N.E.", 38 in "Scotland, W." and "Ireland, S.", and to 39 in "England, N.W."

Depressions observed.—At the commencement of the period pressure was highest over Scandinavia, while shallow depressions were shown over Germany. By the 22nd, however, the region of highest pressure had been transferred to the Bay of Biscay, and from this time till the close of the week small shallow depressions appeared in different parts of the United Kingdom and over the North Sea. The wind, which was at first moderate from the North-Eastwards, consequently became light generally and variable in direction, though as a rule it blew from the Northward or North-Eastward in the north and west, and from West or South-West in the south and south-east. On the 24th and 25th a moderate to strong North-Easterly gale was experienced on our extreme north and north-west coasts.

A 53806. 350.—3/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.

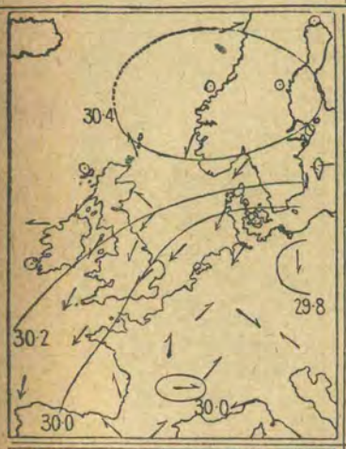
Weather

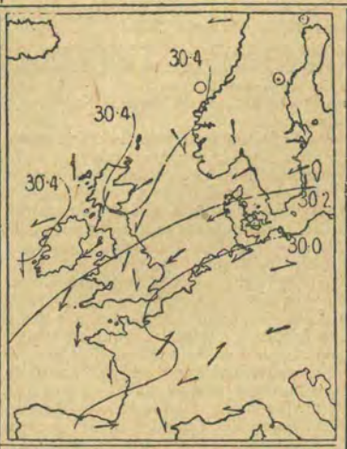
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, March 20.

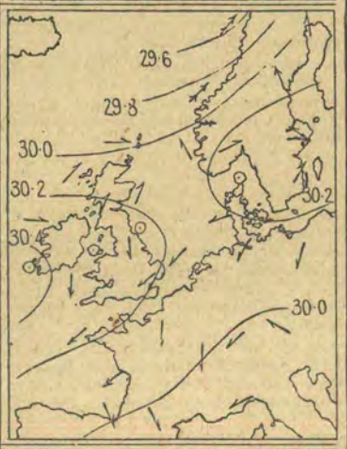
Weather fine in Scandinavia, Denmark, the west and north of our Islands, and the south of France, but cloudy elsewhere, with snow in many places. Some improvement taking place over England later.

Temperature fallen a little in the north of our Islands, and also in the south of France, but risen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 39° at Scilly to 25° at Nairn and 24° at Parsonstown.

Wind fresh or strong from the North-Eastward over England, the North Sea, and the north of France, but light from South-East in Scotland, and variable over Germany and the east and south of France.

Sea rough off the east and south-east of England, and rather rough at Scilly, but moderate to smooth elsewhere.

Barometer falling in Scandinavia, Denmark, and Great Britain, but rising elsewhere. Large anticyclone lying over Scandinavia, with a depression over Germany and a shallower disturbance over the north of Spain. Rise taking place generally later, and depressions dispersing.



Wednesday, March 21.

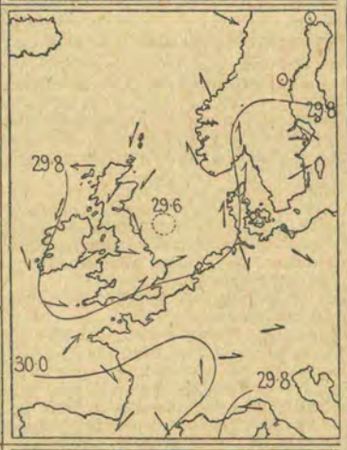
Weather dull on our extreme north and north-west coasts, as well as in France and Germany, with snow in some places, but fair or fine elsewhere. Rain setting in over the north of Scotland later.

Temperature risen in most places; readings over our Islands ranging at 8 a.m. from 42° at Stornoway and 41° at Valencia and Scilly to 26° at Parsonstown. Brisk rise taking place over the United Kingdom later, and thermometer exceeding 50° in some places.

Wind South-Westerly on our north and north-west coasts, and Southerly in the north of Scandinavia, but chiefly North-Easterly elsewhere; fresh or strong in force at our southern stations.

Sea rather rough off the east of England and also at Stornoway.

Barometer rising at all but our extreme northern stations. Anticyclonic systems lying respectively over the south of Ireland and the Baltic, with shallow depressions off the north-west of Norway and the south of France. Fall taking place later at all but the French stations.



Thursday, March 22.

Weather cloudy and unsettled generally, with rain at many of the English and Irish stations, and snow in the west of Norway.

Temperature risen in most places; readings over our Islands ranging at 8 a.m. from 51° at Valencia to 30° at Dungeness.

Wind moderate South-Westerly or Westerly over Ireland and England, but Easterly in the north of Scotland and also in the west of France, and variable over Denmark, Germany, and the east of France. Subsequently veering to the northward at the Irish stations.

Sea moderate to smooth generally.

Barometer falling at all but the French stations. Pressure high over the Bay of Biscay and also over the Baltic, but large area of low readings lying over the northern parts of our Islands and the North Sea, with a shallow depression off the east of Scotland. Low pressure system subsequently moving south-eastwards.

Friday, March 23.

Weather fair at many of our western and northern stations, but dull elsewhere, with rain over England, the Netherlands, and the north of France. Rain or sleet falling later in all parts of the United Kingdom.

Temperature fallen several degrees in the west and north of our Islands, but risen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 44° at Scilly and Jersey to 32° at Stornoway and Wick. Maxima below 40 at some of our northern and north-western stations.

Wind Northerly over the greater part of our Islands, but Southerly or South-Westerly in France and the south-east of England, and South-Easterly on the eastern shores of the North Sea. Subsequently increasing from the North-Eastward on our extreme north and north-west coasts.

Sea rather rough at Scilly and Cape Gris Nez, but moderate to smooth elsewhere.

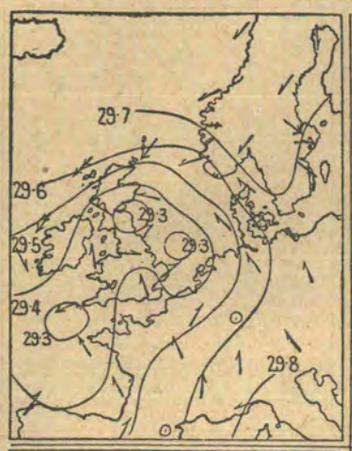
Barometer falling generally. Pressure highest over Portugal and relatively high in the north of Scandinavia, with an irregularly formed depression over the east and south-east of England. Fall continuing all day.

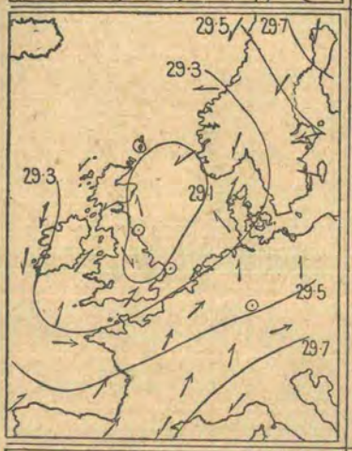
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

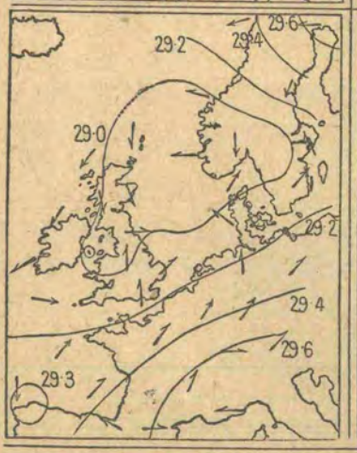
Synoptic Charts.

PRESSURE AND WIND.

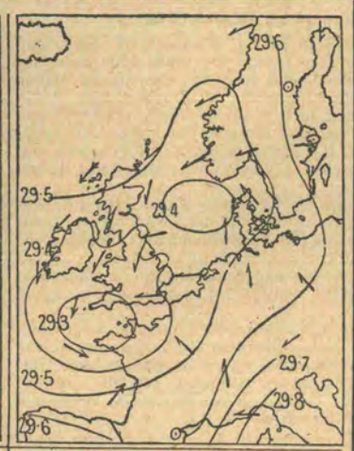
8 a.m.

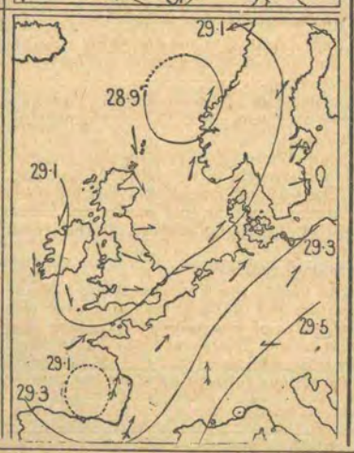






6 p.m.





Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, March 24.

Weather fair over the greater part of England and the eastern shores of the North Sea, but dull elsewhere, with sleet in Scotland and the north of Ireland, and rain in the north-west of France. Rain falling in the south of England later.

Temperature fallen in Scandinavia and the west and south of our Islands, but risen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 43° at Jersey to 29° at Loughborough.

Wind North-Easterly in Scandinavia and the north and west of our Islands; strong to a gale on our extreme north and north-west coasts. Moderate Southerly or South-Easterly in France, Germany, and Denmark, light Easterly in the south of England.

Sea rough off the north coasts of Ireland and Scotland.

Barometer falling in the west and south-west, but rising in most other localities. Pressure somewhat high over Scandinavia, Spain, and the south-east of France, but small depressions lying respectively over the south of Scotland, the southern part of the North Sea, and the mouth of the Channel. Last-mentioned system advancing later along the Channel in an easterly direction.

Sunday, March 25.

Weather cold, changeable, and unsettled, with snow or sleet in many parts of north-western Europe.

Temperature risen somewhat over France, Germany, and the south of England, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 41° at Scilly and Jersey to 31° at Parsonstown and 30° in the Shetlands.

Wind moderate Northerly on our extreme northern and western coasts, Westerly in the south of England, and South-Westerly in the east of England, but light from East or North-East in Scandinavia. Subsequently increasing to gale from West and South-West over the Bay of Biscay.

Sea rather rough at Cape Grisnez and Nice, but moderate to smooth elsewhere.

Barometer falling at all but the Spanish and western French stations. Areas of relatively high pressure lying over Spain and the Gulf of Bothnia, with a large shallow depression over the North Sea and the east of England. Secondary disturbances subsequently appearing over our north-west coasts.

Monday, March 26.

Weather chargeable and unsettled generally, with rain, sleet, or snow in many places, and a thunderstorm at Hurst Castle.

Temperature risen a little in the west of Norway and north of Scotland, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 44° at Jersey to 26° at Parsonstown.

Wind moderate Northerly or North-Easterly over the north of Scandinavia and our western and northern coasts, but South-Westerly in most other localities, with a slight gale at the Channel stations. Subsequently increasing to strong gale from the southward in the west of France.

Sea rough on our south and south-west coasts, but moderate to smooth elsewhere.

Barometer falling generally. Pressure somewhat high in the north of Sweden, and also over the Gulf of Genoa, but large area of low readings lying over the North Sea, the south of Scandinavia, and the north of England, and small depression over the north-west of Spain. Spanish depression subsequently moving north-eastwards to the Bay of Biscay.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 49 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	45	29	40·9	31·4	36·0	− 3·5	0	42	5	0·60	−0·02	*	*
	Stornoway	48	29	41·7	30·7	36·0	− 4·9	0	42	6	1·50	+0·67	24	28
	Wick	47	29	42·3	31·7	36·9	− 2·8	1	36	6	1·02	+0·60	*	*
	Lairg ℳ	48	19	39·9	25·6	32·5	− 6·8	0	67	5	1·63	+0·99	*	*
	Glencarron ℳ	46	21	40·0	27·4	33·5	− 6·3	0	60	5	1·02†	?	?	?
	Fort Augustus ℳ	44	18	40·1	29·3	34·5	− 5·9	0	53	5	?0·86†	?	*	*
1. SCOTLAND, E.	Nairn	51	20	41·7	29·0	35·2	− 5·7	0	48	5	0·80	+0·42	*	*
	Aberdeen	53	25	42·7	29·7	36·0	− 3·7	2	42	5	1·27	+0·76	20	23
	Braemar ℳ	47	14	40·0	24·7	32·1	− 4·9	0	69	6	0·62	+0·02	17‡	20‡
	Ochtertyre ℳ												*	*
	Leith	52	27	43·7	31·3	37·3	− 4·7	5	37	6	1·07	+0·75	*	*
	Marchmont ℳ	53	28	41·9	29·9	35·7	− 4·1	0	44	6	0·55	+0·03	24	28
2. ENGLAND, N.E.	Alnwick Castle	44	29	39·9	31·9	35·8	− 4·9	0	43	6	0·68	+0·19	*	*
	Durham	48	25	41·8	29·7	35·6	− 4·7	0	45	6	0·57	+0·08	29	34
	Shields	47	27	41·9	32·3	37·0	− 4·1	0	35	6	0·70	+0·34	*	*
	Scarborough ℳ	45	28	41·2	31·4	36·2	− 4·8	0	41	3	0·39	−0·01	32‡	37‡
	York	50	27	45·9	30·6	38·0	− 3·8	11	41	2	0·67	+0·29	31	36
	Spurn Head	48	30	41·7	32·0	36·7	− 4·7	0	37	5	0·52	?	*	*
3. ENGLAND, E.	Hillington ℳ	46	26	41·0	29·7	35·2	− 5·8	0	48	6	1·05	+0·71	14	16
	Yarmouth	44	29	39·9	30·9	35·3	− 6·6	0	47	5	1·03	+0·63	*	*
	Geldeston	46	30	40·8	32·0	36·3	− 6·1	0	40	6	0·82	+0·47	12	14
	Cambridge	49	24	43·9	28·9	36·2	− 6·3	5	46	5	0·66	+0·33	16	19
	Rothamsted	45	26	42·4	30·4	36·2	− 5·6	1	39	6	0·94	+0·55	*	*
	Ingatestone	44	27	?42·3	30·6	?36·3	−?6·2	?1	?39	6	1·03	+0·73	11‡	13‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	50	26	45·4	29·3	37·1	− 4·4	10	45	4	0·55	+0·20	23‡	27‡
	Loughborough	54	26	45·0	29·9	37·2	− 4·6	8	43	5	0·70	+0·36	*	*
	Leicester	54	27	43·0	30·7	36·7	− 5·1	3	39	5	0·54	+0·19	17	20
	Cheadle ℳ	51	26	43·4	30·0	36·5	− 4·3	4	42	5	0·58	+0·08	*	*
	Churchstoke ℳ	49	22	44·2	27·8	35·8	− 5·7	6	50	4	0·51	+0·10	16	19
	Hereford ℳ	52	25	45·5	30·3	37·7	− 5·1	10	42	4	0·82	+0·43	*	*
	Cirencester	49	24	42·6	29·7	36·0	− 6·6	2	42	5	1·03	+0·54	15	18
	Oxford	50	29	44·0	30·6	37·1	− 5·8	6	40	7	1·09	+0·74	16	19
5. ENGLAND, S.	London	47	28	43·9	32·1	37·8	− 5·9	5	35	5	0·85	+0·52	9‡	11‡
	Strathfield Turgiss ℳ	49	27	45·1	31·0	37·8	− 5·5	9	39	6	1·13	+0·80	*	*
	Dungeness	46	25	41·1	31·0	35·9	− 8·8	0	43	5	0·65	+0·24	*	*
	Hastings (St. Leonard's)	46	26	40·7	31·8	36·1	− 7·4	0	41	7	0·96	+0·55	11	13
	Southampton	49	29	45·0	32·7	38·7	− 5·3	8	34	4	0·91	+0·44	15	18
	Hurst Castle	45	30	42·7	33·9	38·2	− 6·5	2	28	5	0·83	+0·41	*	*
	Stowell ℳ	49	28	43·5	30·8	37·0	− 5·8	4	39	5	0·81	?	12‡	14‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	49	26	41·7	31·7	36·6	− 4·5	0	38	5	0·90†	−0·44	*	*
	Glasgow	46	28	41·1	31·4	36·1	− 5·3	0	41	5	0·70	+0·15	22	26
	Ardrossan	47	29	42·7	30·6	36·5	− 5·1	2	39	6	0·59	+0·04	*	*
	Glenlee ℳ	51	22	?43·9	26·4	?34·9	−?6·4	?5	?54	3	?0·42	?	*	*
	Douglas (Isle of Man)	50	26	43·6	30·9	37·1	− 5·9	4	39	3	0·19	−0·42	43	50
7. ENGLAND, N.W.	Newton Reigny (Penrith)	54	16	43·2	26·1	34·4	− 6·6	3	55	5	0·64	+0·17	33	38
	Barrow-in-Furness	46	29	42·9	31·6	37·1	− 6·6	3	36	3	0·82	+0·32	*	*
	Stonyhurst	50	26	42·6	30·7	36·5	− 5·5	2	39	4	0·96	+0·26	30	35
	Blackpool ℳ	46	29	43·1	32·1	37·4	− 6·0	3	34	5	0·48	0·00	38	44
	Manchester	49	28	44·4	31·2	37·6	− 4·4	7	38	4	0·40	−0·12	*	*
	Liverpool Obsy (Bidston)	50	30	43·4	32·6	37·8	− 5·5	4	32	6	0·42	+0·05	*	*
	Llandudno ℳ	49	29	43·6	32·7	38·0	− 6·3	4	33	5	0·29	−0·15	32	38
	Holyhead	47	31	43·4	34·9	39·0	− 5·9	4	25	5	0·47	−0·01	*	*
8. ENGLAND, S.W.	Llandovery	54	23	46·0	28·3	36·9	− 6·1	11	49	5	0·60	−0·10	*	*
	Pembroke	48	32	43·1	34·4	38·6	− 6·5	3	26	3	0·32	−0·19	35	41
	Arlington (N. Devon)	50	28	42·4	30·3	36·2	− 7·1	1	40	5	1·63	+0·91	*	*
	Cullompton ℳ	50	26	45·2	31·8	38·3	− 5·7	9	37	4	0·85	+0·29	18	15
	Falmouth	49	33	44·3	34·0	39·0	− 6·7	6	29	6	1·65	+0·90	18	21
	Plymouth	53	32	45·7	33·5	39·6	− 5·9	10	32	5	1·02	+0·47	17	20
	Prawle Point	52	25	44·1	30·0	36·8	− 8·0	6	42	4	0·99	?	*	*
9. IRELAND, N.	Malin Head	46	31	41·6	33·6	37·5	− 4·8	0	32	6	0·29	?	*	*
	Londonderry	49	26	44·3	30·6	37·2	− 5·2	6	40	6	0·83	+0·22	*	*
	Mullaghmore	49	29	43·4	32·3	37·7	− 6·1	4	34	6	1·00	+0·39	*	*
	Belmullet	49	31	43·4	34·3	38·7	− 7·0	4	27	6	1·87	?	*	*
	Markree Castle	49	19	43·9	27·5	35·5	− 7·7	5	51	6	0·92	+0·37	26	30
	Brookeborough	50	19	43·6	25·7	34·5	− 7·1	4	57	4	0·52	?	*	*
	Armagh	51	20	44·1	27·0	35·3	− 7·8	6	52	4	0·57	+0·09	21	24
	Donaghadee	51	30	44·4	33·1	38·6	− 5·5	7	32	6	0·93	+0·48	*	*
	Edgeworthstown	54	23	44·1	27·9	35·8	− 5·7	6	49	3	0·41	−0·22	*	*
10. IRELAND, S.	Dublin	53	28	44·8	32·2	38·3	− 5·8	8	35	5	0·21	−0·27	29	34
	Parsonstown	54	22	45·6	26·1	35·6	− 7·6	10	56	5	0·32	−0·20	28	33
	Kilkenny	53	25	45·6	29·7	37·4	− 5·8	10	44	3	0·19	−0·32	*	*
	Waterford	53	24	46·7	29·6	37·9	− 6·9	13	45	4	0·29	−0·40	*	*
	Roche's Point	52	30	46·7	33·1	39·7	− 5·5	13	33	3	0·57	−0·26	*	*
	Valencia	51	30	47·3	34·9	40·9	− 5·5	15	27	5	0·96	+0·01	41	48
	Killarney	52	22	45·6	29·4	37·3	− 7·5	10	45	5	0·60	?	*	*
	Foynes	50	30	45·6	34·4	39·8	− 4·5	10	28	5	0·57	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	49	35	43·9	37·4	40·6	− 6·4	5	17	5	1·29	+0·74	*	*
	Jersey (Noirmont)	51	30	44·7	33·7	39·0	− 5·9	8	30	6	0·79	+0·29	18	21

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office Victoria Street.

NOTE.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 13.] *Second Series.* WEEK ENDING MONDAY, 2ND APRIL, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 52.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	50	15	41·6	29·9	35·6	5 below.	0	−14	45	+22	44	− 52	580	+165
	1. SCOTLAND, EAST	53	5	42·1	30·0	35·9	5 below.	0	−20	41	+15	54	− 88	572	+110
	2. ENGLAND, N.E.	50	25	42·9	32·8	37·7	5 below.	3	−17	32	+10	60	− 87	482	+ 67
	3. ENGLAND, EAST	56	29	46·4	33·5	39·7	4 below.	12	−17	31	+ 9	71	−126	568	+133
	4. MIDLAND COUNTIES	57	22	46·7	32·4	39·3	4 below.	13	−18	35	+13	81	−134	570	+144
	5. ENGLAND, SOUTH	54	28	47·0	35·6	41·1	4 below.	14	−19	25	+ 9	83	−150	517	+188
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	50	24	43·8	32·9	38·2	5 below.	5	−17	32	+15	75	− 85	438	+ 99
	7. ENGLAND, N.W.	51	26	44·8	33·4	39·0	5 below.	8	−16	31	+15	58	−106	446	+114
	8. ENGLAND, S.W.	52	22	47·0	34·2	40·4	5 below.	14	−17	29	+17	106	−171	441	+237
	9. IRELAND NORTH	53	26	44·6	33·2	38·7	6 below.	7	−20	31	+15	114	−100	362	+ 63
	10. IRELAND, SOUTH	54	25	46·9	33·2	39·8	6 below.	14	−20	32	+20	171	−140	319	+114
	— CHANNEL ISLANDS	52	36	48·4	39·3	43·7	3 below.	23	−11	8	+ 5	168	−155	225	+136

Rainfall. / Bright Sunshine.

	DISTRICTS. (See p. 52.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	6	4	2 less.	62	− 1	10·1	−2·0	28	31	207	+19	24	+ 2
	1. SCOTLAND, EAST	5	8	3 more.	55	+ 9	6·9	−0·3	14	15	187	−62	21	− 8
	2. ENGLAND, N.E.	6	14	9 more.	49	+ 4	5·8	−0·1	22	25	196	+ 4	22	0
	3. ENGLAND, EAST	6	5	1 more.	50	+ 4	5·2	−0·5	17	19	177	−74	19	− 9
	4. MIDLAND COUNTIES	5	6	1 more.	43	− 1	4·6	−2·1	18	20	176	−47	19	− 6
	5. ENGLAND, SOUTH	6	6	2 more.	46	+ 3	5·8	−1·1	15	16	162	−73	18	− 8
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	3	5	1 less.	41	−14	8·8	−3·3	34	38	242	+48	27	+ 5
	7. ENGLAND, N.W.	5	5	0 (average).	51	+ 3	5·0	−3·4	28	31	217	+26	24	+ 2
	8. ENGLAND, S.W.	5	9	3 more.	48	− 3	7·3	−4·2	25	28	254	− 1	28	0
	9. IRELAND, NORTH	5	8	3 more.	47	−12	7·3	−1·6	30	34	198	−19	22	− 3
	10. IRELAND, SOUTH	4	8	1 more.	41	−14	7·7	−3·2	34	39	260	+11	29	+ 1
	— CHANNEL ISLANDS	5	9	3 more.	61	+ 4	7·4	−1·4	41	46	239	−79	26	− 8

General Remarks.

Weather has continued in an unsettled condition generally, although at our more western stations some bright intervals have been experienced. Rather heavy falls of cold rain, sleet, or snow have occurred in most districts, especially over the north-eastern parts of England.

Temperature has again been below the mean, the deficit ranging from 3° in the "Channel Islands" and 4° over eastern, southern, and central England, to 5° over Scotland and in the north and south-west of England, and to 6° in Ireland. The highest of the maxima, which were recorded on March 29th in England, and on April 1st in Ireland and Scotland, varied from 50° in "England, N.E." and over the north and west of Scotland, to 56° in "England, E." and 57° in the "Midland Counties". The absolute minima, which were registered on March 28th in Scotland and on irregular dates elsewhere, were as low as 5° in "Scotland, E." (at Braemar), and 15° in "Scotland, N." (at Lairg), while in the other parts of the Kingdom they ranged from 22° in the "Midland Counties" and "England, S.W." to 29° in "England, E." and 36° in the "Channel Islands".

Rainfall has been rather less than the mean in "Scotland, N." and "Scotland, W." and about equal to it in "England, N.W.", but in all other districts it has been more than the normal. In "England, N.E." a very considerable excess is shown.

Bright sunshine has not differed materially in most districts from that reported last week, the percentage of the possible amount of duration ranging from 15 in "Scotland, E." and 16 in "England, S." to 38 in "Scotland, W.", 39 in "Ireland, S.", and 46 in the "Channel Islands".

Depressions observed.—As the period commenced a shallow depression lay near the Shetlands, another in the neighbourhood of Stockholm, and a third over the Bay of Biscay. By the 28th, however, these had dispersed, and a much deeper disturbance had advanced from the north-westward to the southward of Ireland. This depression subsequently moved slowly eastwards up the English Channel until late on the 29th, when it travelled north-eastwards and finally disappeared over the south of Sweden. During its passage over the Channel and the North Sea the system became much less deep, so that the winds, which at first were strong to a gale on nearly all our coasts, as well as over the Bay of Biscay and the west and north of France, gradually moderated and shifted to the Northward or North-Westward very generally. At the end of the period pressure was highest off our western coasts, while shallow depressions were passing south-eastwards over our more eastern counties and the North Sea.

A 53851. 350.—4/88. Wt. 36. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.

Weather

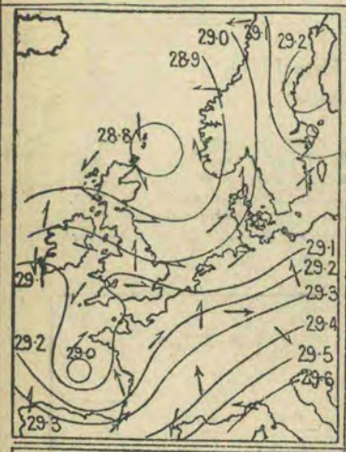
During the 24 hours succeeding

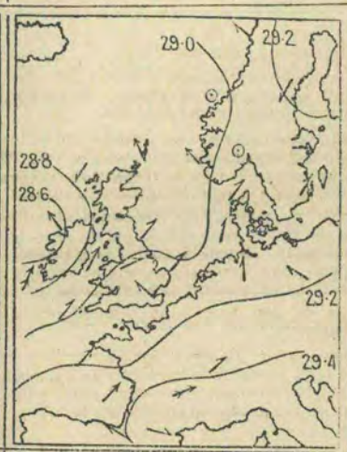
8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, March 27.

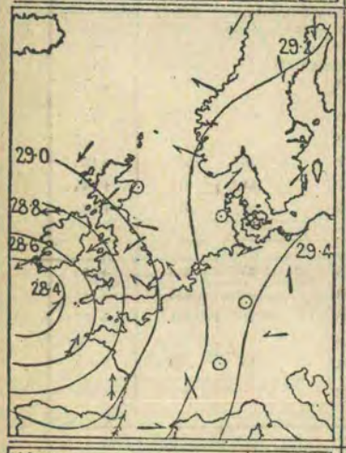
Weather changeable and unsettled generally, with snow showers in the north-west of our Islands and also at Fanö. Snow, sleet, or rain falling later in nearly all parts of Western Europe.

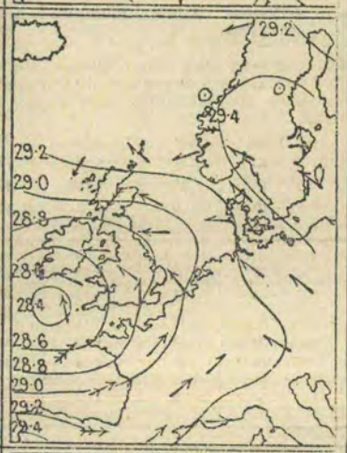
Temperature risen several degrees in the south of France, and slightly on our own south-west coasts, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 43° at Jersey to 30° at Nairn and Parsonstown. Sharp frost occurring over Scotland at night.

Wind light or moderate from the Westward over the greater part of our Islands, and from the Eastward or North-Eastward in Scandinavia, but strong to a gale from South or South-West in the west of France. Subsequently backing to the Southward on our western coasts, and increasing in force.

Sea rather rough at some of the Channel stations.

Barometer falling generally. Pressure highest over the Mediterranean and south of Spain, with a large shallow depression off the north-east of Scotland, and a smaller but deeper disturbance over the Bay of Biscay. Another and still deeper system appearing later off the west of Ireland.





Wednesday, March 28.

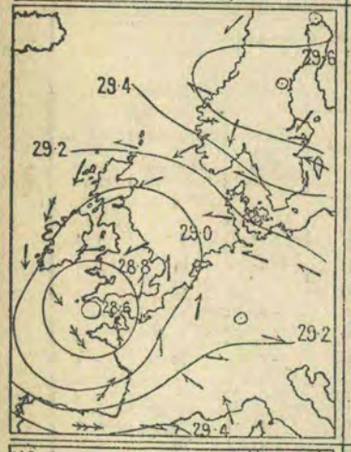
Weather fair in Scotland, Scandinavia, and the greater part of France, but dull elsewhere, with rain or snow at several of our western and southern stations. Sleet showers falling later on our north and east coasts.

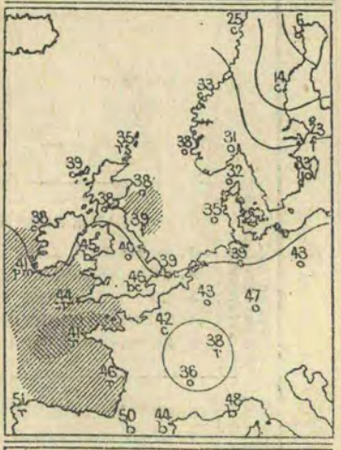
Temperature risen at all but our northern stations; readings over our Islands ranging at 8 a.m. from 45° at Scilly, Prawle Point, and Jersey, to 22° at Aberdeen.

Wind Southerly in France, South-Easterly in the south and east of our Islands, and Easterly in the west, but variable in Sweden and Denmark. Slight Easterly gale reported on our north-west coasts, and strong Southerly to South-Westerly gale over the Bay of Biscay.

Sea high in the Bay of Biscay and rough on our west and south-west coasts.

Barometer falling in Ireland, England, and France, but rising elsewhere. Pressure highest (29·5 ins. and upwards) over South Germany and lowest (28·4 ins. and less) in a deep depression lying off the south of Ireland. Depression subsequently moving slowly eastwards, and barometer rising again in west.





Thursday, March 29.

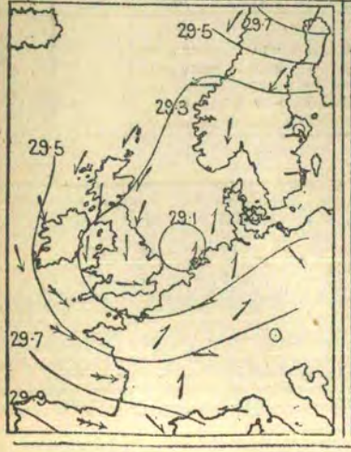
Weather cloudy generally, with showers in many parts of the United Kingdom and France.

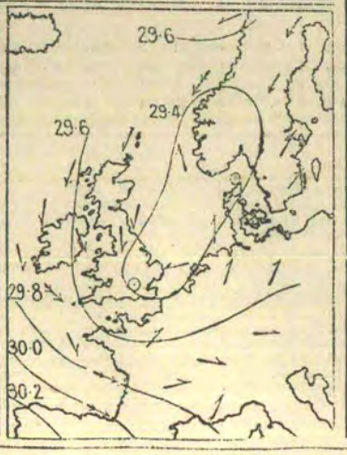
Temperature risen a little in the north, but changed irregularly elsewhere; readings over our Islands ranging at 8 a.m. from 46° in London and 45° at Holyhead to 35° at Sumburgh Head and Parsonstown.

Wind fresh from South-East or South on our south and east coasts, strong from East in the north, and strong from north in Ireland. Strong Westerly gales blowing over the Bay of Biscay.

Sea very high in the Bay of Biscay and high or rough on all our west and south-west coasts.

Barometer rising at all but the Danish and German stations. Pressure highest in the south of Spain, but relatively high in Scandinavia. Depression of previous day advancing slowly eastwards along the Channel but systems gradually filling up.





Friday, March 30.

Weather fair in Ireland, but cloudy or overcast elsewhere, with rain or sleet showers in many places.

Temperature risen slightly in the west and north of our Islands, and briskly in Sweden, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 44° at Bellmullet and Valencia to 35° at York.

Wind North-Easterly on our northern coasts, but Northerly in the west and North-Westerly or Westerly in the south; strong to a gale over the Bay of Biscay and the mouth of the Channel. Light South-Westerly breezes reported over the Netherlands, and Southerly airs in Denmark.

Sea high in the Bay of Biscay, and rough on nearly all the more exposed parts of our coasts.

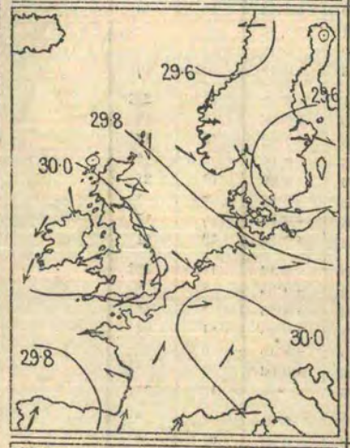
Barometer rising at all but the Scandinavian stations. Pressure highest over Spain, but relatively high in the north of Sweden. Depression of previous two days now moving north-eastwards across the North Sea, and continuing to grow shallower.

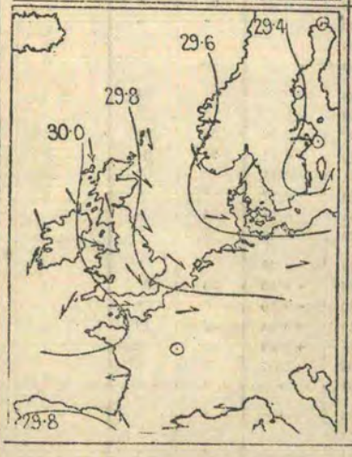
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

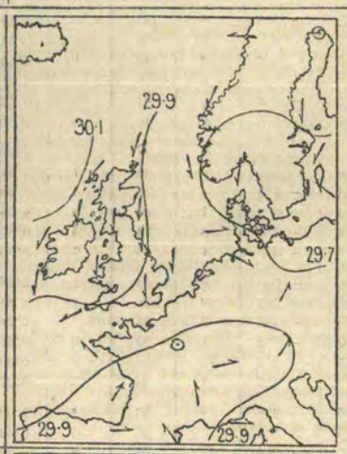
PRESSURE AND WIND.

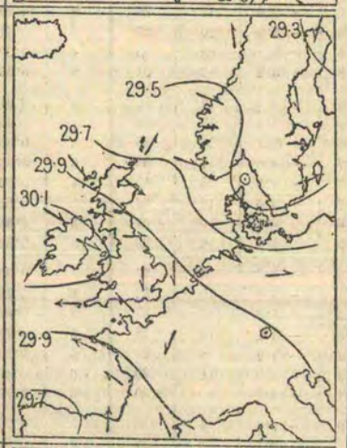
8 a.m.





6 p.m.





Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, March 31.

Weather fine at many of our western and northern stations, but dull elsewhere, with showers in places. Improvement taking place generally later.

Temperature fallen a few degrees over Germany and the Netherlands, but changed little and irregularly elsewhere; readings over our Islands ranging at 8 a.m. from 45° at Scilly and Prawle Point to 36° at Nairn and Parsonstown. Frost occurring generally at night.

Wind chiefly Northerly (North-West to North-East) over our Islands and France, but South-Westerly over the Netherlands, Germany, and Denmark.

Sea rather rough in the south-west, but slight or smooth elsewhere.

Barometer rising generally. Pressure highest over Spain but relatively high to the westward of our Islands. Depression of the previous three days now lying over the north of Denmark and continuing to fill up.

Sunday, April 1.

Weather fair over the greater part of our Islands, but dull at many of the Continental stations, with snow at Stockholm. Rain or sleet falling later in the north of Scotland.

Temperature fallen in most places; readings over our Islands ranging at 8 a.m. from 44° at Jersey and 43° at Stornoway and Scilly to 32° at Parsonstown.

Wind moderate North-Westerly on our north and east coast, and also on the eastern shores of the North Sea, but North-Easterly or Easterly over the south of our Islands and the west of France.

Sea rather rough at Valencia, but moderate to smooth elsewhere.

Barometer falling in Scandinavia, and also over Spain and the south of France, but rising elsewhere. Anticyclone lying over the west of our Islands, with large shallow depressions lying respectively over the north-west of Norway, the south of Sweden, and the north-west of Spain. Fall taking place on our northern coasts later.

Monday, April 2.

Weather fine in France and the south-west of our Islands, but cloudy elsewhere, with cold showers in many places.

Temperature risen over the greater part of our Islands, but little changed elsewhere; readings over the United Kingdom ranging at 8 a.m. from 46° at Belmullet and 45° at Scilly to 35° in the Shetlands. Slight frost occurring in most places at night.

Wind moderate or fresh from the Northward or North-Westward in our Islands, and also on the eastern shores of the North Sea, but Easterly in France and South-Westerly in Germany. Subsequently increasing from the Northward at many of our northern stations.

Sea moderate to smooth, except at Stornoway.

Barometer rising a little in the north of our Islands, and also in France, but falling elsewhere. Pressure high to the westward of Ireland, and low over Sweden, with a shallow depression over the Irish Sea. Depression subsequently moving southwards to France, and barometer rising at all our northern stations.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 49 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	44	28	41·4	31·9	36·5	− 3·9	0	39	6	0·27	−0·31	*	*
	Stornoway	49	27	43·0	32·6	37·7	− 4·1	3	33	6	0·34	−0·40	28	31
	Wick	50	22	42·7	30·3	36·3	− 4·2	2	40	6	0·50	+0·10	*	*
	Lairg ℌ	48	15	40·3	27·1	33·5	− 6·6	0	60	6	0·41	−0·17	*	*
	Glencarron ℌ	45	21	40·0	26·9	33·3	− 7·8	0	61	6	0·68†	?	?	?
	Fort Augustus ℌ	48	25	42·1	?30·3	?36·0	?− 5·8	0	?40	4	0·30†	?	*	*
1. SCOTLAND, E.	Nairn	49	20	41·9	30·4	36·0	− 5·9	0	42	5	0·59	+0·24	*	*
	Aberdeen	47	17	41·6	29·9	35·6	− 5·2	0	45	7	0·67	+0·16	15	17
	Braemar ℌ	42	5	38·0	25·1	31·4	− 6·9	0	74	4	0·28	−0·29	7‡	8‡
	Ochtertyre ℌ	53	24	46·0	31·3	38·4	− 3·6	11	39	4	0·56	−0·02	*	*
	Leith	49	26	43·0	32·1	37·4	− 5·8	3	34	4	0·87	+0·54	*	*
	Marchmont ℌ	48	24	42·3	31·4	36·7	− 4·3	1	36	7	1·90	+1·37	19	21
2. ENGLAND, N.E.	Alnwick Castle	45	25	40·6	32·9	36·6	− 5·3	0	38	7	2·16	+1·66	*	*
	Durham	48	29	42·1	31·2	36·5	− 5·3	0	37	7	2·28	+1·78	13	15
	Shields	48	27	43·1	32·7	37·8	− 4·6	3	33	7	2·24	+1·85	*	*
	Scarborough ℳ	48	27	42·4	33·6	37·9	− 4·4	1	29	6	0·63	+0·21	28‡	31‡
	York	50	28	46·1	32·4	39·1	− 4·5	11	35	6	0·60	+0·21	26	29
	Spurn Head	45	31	43·1	33·7	38·3	− 4·6	3	29	5	0·27	?	*	*
3. ENGLAND, E.	Hillington ℳ	50	29	46·3	32·9	39·6	− 2·8	13	33	6	0·30	−0·07	23	26
	Yarmouth	46	31	42·9	34·6	38·6	− 4·4	3	25	5	0·42	+0·02	*	*
	Geldeston	50	32	46·5	34·3	40·2	− 3·6	13	29	6	0·49	+0·14	16	18
	Cambridge	56	30	49·3	32·4	40·6	− 3·3	20	37	6	0·51	+0·16	17	19
	Rothamsted	50	29	46·3	33·0	39·5	− 3·8	12	33	6	0·62	+0·17	*	*
	Ingatestone	50	31	46·4	33·6	39·8	− 3·9	12	31	5	0·46	+0·15	12‡	14‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	50	28	46·7	32·4	39·3	− 3·5	13	35	5	0·51	+0·13	22‡	25‡
	Loughborough	54	30	47·9	32·9	40·2	− 3·4	17	35	3	0·40	+0·02	*	*
	Leicester	57	24	49·2	32·8	40·8	− 2·7	20	36	4	0·35	−0·02	15	17
	Cheadle ℳ	50	26	44·6	31·2	37·7	− 4·6	7	38	6	0·56	+0·05	*	*
	Churchstoke ℳ	49	22	45·0	30·8	37·7	− 5·5	8	40	4	0·66	+0·26	19	21
	Hereford ℳ	51	26	47·5	32·4	39·7	− 4·6	15	36	5	0·68	+0·28	*	*
	Cirencester	49	25	45·7	31·9	38·6	− 5·2	10	37	5	0·65	+0·16	15	17
	Oxford	50	30	47·0	34·4	40·5	− 4·3	14	29	5	0·62	+0·24	19	21
5. ENGLAND, S.	London	53	30	48·4	35·6	41·8	− 3·8	18	25	5	0·50	+0·12	11‡	12‡
	Strathfield Turgiss ℳ	54	30	48·9	33·8	41·1	− 3·5	19	32	6	0·72	+0·34	*	*
	Dungeness	47	29	45·4	35·9	40·5	− 5·3	10	23	5	0·66	+0·25	*	*
	Hastings (St. Leonard's)	48	33	46·2	37·6	41·8	− 3·1	12	18	5	0·72	+0·28	21	24
	Southampton	53	31	48·3	35·4	41·7	− 3·7	18	26	6	0·56	+0·10	16	18
	Hurst Castle	51	33	46·0	36·9	41·3	− 4·6	11	20	6	0·49	+0·06	*	*
	Stowell ℳ	49	28	45·7	34·0	39·7	− 4·1	10	30	6	0·73	?	10‡	11‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	47	29	43·5	32·6	37·9	− 4·3	4	33	3	0·29†	−0·81	*	*
	Glasgow	46	29	43·1	32·8	37·8	− 5·1	3	32	2	0·62	+0·08	27	30
	Ardrossan	49	29	43·9	34·1	38·9	− 4·0	5	28	2	0·33	−0·21	*	*
	Glenlee ℌ	49	24	42·7	30·2	36·3	− 6·5	2	41	3	0·58	?	*	*
	Douglas (Isle of Man)	50	30	45·8	34·9	40·2	− 4·2	11	26	4	0·54	−0·05	40	45
7. ENGLAND, N.W.	Newton Reigny (Penrith)	47	26	43·1	30·2	36·5	− 5·8	3	41	7	0·63	+0·19	21	24
	Barrow-in-Furness	51	29	46·1	34·1	39·9	− 5·0	11	29	5	0 69	+0·21	*	*
	Stonyhurst	49	27	43·8	32·3	37·9	− 5·4	5	34	6	0·57	−0·06	28	31
	Blackpool ℳ	51	31	45·6	33·5	39·4	− 5·5	10	31	5	0·44	+0·01	28	31
	Manchester	50	27	45·4	32·8	38·9	− 4·1	10	33	6	0·41	−0·11	*	*
	Liverpool Obsr (Bidston)	51	31	45·7	33·7	39·5	− 5·4	10	30	5	0·54	+0·17	*	*
	Llandudno ℳ	47	30	43·9	35·3	39·5	− 5·7	5	24	4	0·41	−0·01	34	38
	Holyhead	49	32	44·9	35·4	40·0	− 5·9	8	24	4	0·28	−0·18	*	*
8. ENGLAND, S.W.	Llandovery	50	23	48·1	31·7	39·7	− 4·2	17	39	4	0·38	−0·30	*	*
	Pembroke	48	33	46·0	35·7	40·7	− 4·4	11	24	5	0·66	+0·16	30	34
	Arlington (N. Devon)	48	22	45·3	31·4	38·1	− 6·7	9	38	5	0·82	+0·10	*	*
	Cullompton ℳ	52	27	47·8	34·3	40·9	− 4·4	16	30	6	1·14	+0·54	17	19
	Falmouth	49	35	46·3	36·7	41·4	− 5·1	12	21	6	1·27	+0·52	28	31
	Plymouth	51	32	47·7	35·9	41·6	− 5·0	16	24	5	1·65	+1·07	23	26
	Prawle Point	51	29	47·9	33·7	40·6	− 5·3	17	32	4	0·37	?	*	*
9. IRELAND, N.	Malin Head	47	30	42·1	34·9	38·1	− 4·9	0	22	5	0·25	?	*	*
	Londonderry	49	31	44·9	33·8	39·2	− 4·6	8	30	6	0·73	+0·13	*	*
	Mullaghmore	50	30	45·0	34·1	39·4	− 5·7	8	29	3	0·34	−0·22	*	*
	Belmullet	49	29	44·1	34·3	39·1	− 7·4	6	28	6	2·42	?	*	*
	Markree Castle	51	25	44·2	32·0	37·9	− 6·6	6	35	5	0·61	+ 0·5	32	36
	Brookeborough	51	25	44·4	30·6	37·3	− 5·9	7	40	4	0·89	?	*	*
	Armagh	53	26	45·8	31·5	38·4	− 6·0	11	38	2	0·49	0·00	28	31
	Donaghadee	50	31	46·4	36·1	41·1	− 4·0	12	23	5	0·56	+0·11	*	*
	Edgeworthstown	52	26	44·9	31·1	37·8	− 5·0	8	39	5	0·79	+0·19	*	*
10. IRELAND, S.	Dublin	52	29	46·6	35·0	40·6	− 4·7	13	26	4	0·60	+0·12	32	36
	Parsonstown	54	25	46·7	30·0	38·1	− 6·1	13	44	3	0·58	+0·07	29	33
	Kilkenny	53	27	47·6	32·3	39·7	− 4·4	16	36	3	0·53	+0·02	*	*
	Waterford	54	28	48·7	32·4	40·3	− 5·5	19	37	4	0·48	−0·20	*	*
	Roche's Point	51	31	47·1	34·3	40·5	− 5·6	14	29	5	0·47	−0·35	*	*
	Valencia	52	32	47·6	35·3	41·3	− 5·6	16	26	5	1·52	+0·58	42	47
	Killarney	50	25	45·6	30·3	37·7	− 7·7	10	42	5	1·23	?	*	*
	Foynes	51	31	45·4	35·7	40·4	− 4·8	10	23	2	0·57	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	49	38	47·3	39·4	43·2	− 4·6	19	7	5	0·77	+0·22	*	*
	Jersey (Noirmont)	52	36	49·4	39·1	44·1	− 1·7	27	8	5	0·94	+0·44	41	46

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ℌ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 14.] *Second Series.* WEEK ENDING MONDAY, 9TH APRIL, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 56.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	51	24	45·3	31·5	38·1	4 below.	9	− 8	37	+14	53	− 63	617	+184
	1. SCOTLAND, EAST	58	23	46·2	30·4	38·0	5 below.	12	−11	41	+19	66	−104	613	+129
	2. ENGLAND, N.E.	50	28	42·7	31·5	36·8	7 below.	2	−21	35	+18	62	−114	517	+ 84
	3. ENGLAND, EAST	49	22	43·2	29·0	35·7	9 below.	3	−29	44	+26	74	−162	612	+158
	4. MIDLAND COUNTIES	53	23	44·9	29·1	36·6	9 below.	8	−26	44	+26	89	−168	614	+167
	5. ENGLAND, SOUTH	49	24	43·7	30·5	36·8	9 below.	5	−31	39	+26	88	−189	556	+215
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	52	25	47·0	32·2	39·2	5 below.	14	−13	35	+21	89	−104	473	+117
	7. ENGLAND, N.W.	49	25	44·3	32·3	38·0	8 below.	6	−22	33	+20	64	−134	479	+131
	8. ENGLAND, S.W.	54	25	44·9	31·8	38·1	7 below.	8	−26	36	+27	114	−198	477	+265
	9. IRELAND NORTH	54	24	47·2	33·7	40·1	5 below.	15	−16	30	+17	129	−119	393 *	+ 78
	10. IRELAND, SOUTH	53	23	48·1	33·4	40·4	6 below.	17	−20	32	+22	188	−161	351	+135
	— CHANNEL ISLANDS	46	34	44·1	36·8	40·3	8 below.	6	−32	22	+20	174	−187	247	+156

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 56.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	4	3	2 less.	66	0	10·4	−2·3	23	25	230	+ 2	24	0
	1. SCOTLAND, EAST	3	2	3 less.	58	+ 9	7·1	−0·6	36	39	223	−60	23	− 7
	2. ENGLAND, N.E.	3	1	3 less.	52	+ 4	5·9	−0·4	28	31	224	− 9	23	− 1
	3. ENGLAND, EAST	5	2	2 less.	55	+ 7	5·4	−0·7	39	43	216	−86	22	− 8
	4. MIDLAND COUNTIES	3	1	4 less.	46	− 2	4·7	−2·4	29	31	205	−59	21	− 6
	5. ENGLAND, SOUTH	2	1	4 less.	48	+ 2	5·9	−1·5	33	36	195	−81	19	− 9
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	2	less than ½	5 less.	43	−15	8·8	−3·8	39	42	281	+40	29	+ 4
	7. ENGLAND, N.W.	1	less than ½	4 less.	52	+ 1	5·0	−3·9	33	36	250	+14	25	+ 1
	8. ENGLAND, S.W.	2	1	6 less.	50	− 5	7·4	−4·8	44	48	298	+ 2	30	0
	9. IRELAND, NORTH	3	2	4 less.	50	−13	7·5	−1·9	23	25	221	−39	22	− 5
	10. IRELAND, SOUTH	3	2	5 less.	44	−15	7·9	−3·6	38	41	298	0	30	0
	— CHANNEL ISLANDS	3	2	4 less.	64	+ 4	7·6	−1·7	50	54	289	−72	28	− 8

General Remarks.

Weather has remained in a cold changeable state generally, with occasional showers of snow, hail, or cold rain, interspersed by intervals of bright sunshine. In Ireland and Scotland the showers have been somewhat less frequent than at the English stations.

Temperature has been again below the mean generally, the deficit ranging from 4° or 5° in Scotland to as much as 9° in "England, E.", the "Midland Counties", and "England, S." The highest readings, which were registered on irregular dates, ranged from 54° in "England, S.W." and "Ireland, N.", and 53° in the "Midland Counties" and "Ireland, S.", to 49° in "England, E.", "England, S.", and "England, N.W.", and 46° in the "Channel Islands". The lowest of the minima, which were also recorded on varying dates, ranged from 22° in "England, E." and 23° in "Scotland, E.", "Midland Counties", and "Ireland, S.", to 28° in "England, N.E." and 34° in the "Channel Islands".

Rainfall has been considerably less than the mean in all districts, the amounts measured in "Scotland, W." and "England, N.W." being scarcely appreciable.

Bright sunshine has been much more prevalent than it was last week, especially over the eastern and southern parts of the Kingdom. The percentage of the possible amount has ranged from 25 in "Scotland, N." and "Ireland, N.", to 43 in "England, E.", 48 in "England, S.W.", and 54 in the "Channel Islands".

Depressions observed.—Barometrical pressure has been usually highest over our western coasts, and lowest over northern, central, and southern Europe, and the prevailing winds have therefore been Northerly or North-Easterly. On our northern coasts, however, they have frequently inclined to the North-Westward or become variable. The only depressions of any importance were those which appeared respectively over the southern part of the Iberian Peninsula on the 6th, and over the Baltic on the 8th; the former disturbance is reported to have occasioned gales and snowstorms in Spain, while the latter produced slight gales on the eastern shores of the North Sea. Numerous small secondary disturbances have travelled southwards across Great Britain, but with the exception of one which passed over Wales on the 4th, these were extremely shallow and ill-defined.

* This value has been altered owing to the receipt of further information.

A 53925. 350.—4/88. Wt. . E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.

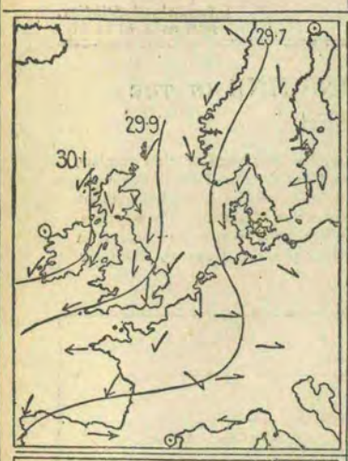
Weather

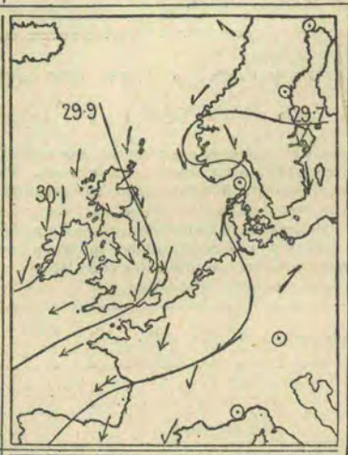
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, April 3.

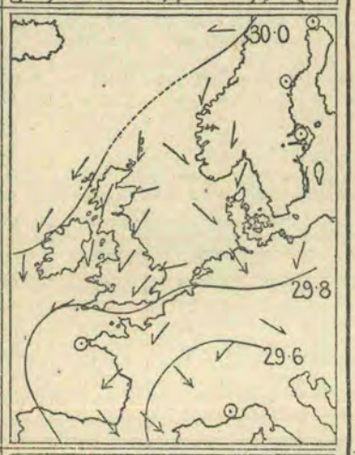
Weather dull at several of the German and French stations, but fair in most other localities. Snow or sleet showers falling later in most parts of the United Kingdom.

Temperature fallen in most places; readings over our Islands ranging at 8 a.m. from 40° at Valencia and Scilly to 34° at Sumburgh Head, Wick, and Oxford, and 33° at Parsonstown. Sharp frost occurring at night at all but our western stations.

Wind moderate Northerly or North-Westerly on our northern coasts, but fresh North-Easterly at our southern and most of the French stations.

Sea rather rough on the more exposed parts of the English coasts, but moderate to smooth elsewhere.

Barometer rising at all but the French stations. Pressure highest over our western coasts, with large areas of low readings over the Baltic and Finland, and also over Spain and the south of France. Slight fall taking place on our northern coasts later.



Wednesday, April 4.

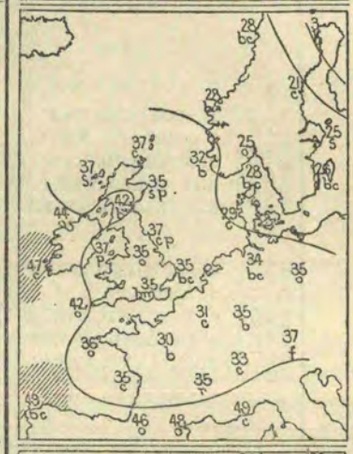
Weather changeable and unsettled generally, with showers of sleet in many parts of our Islands.

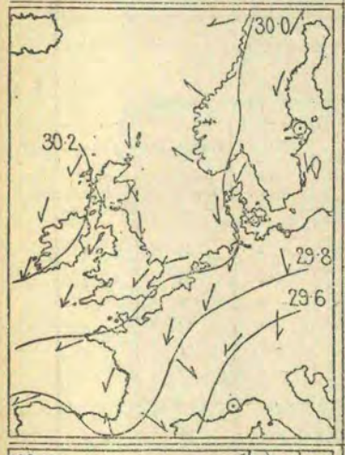
Temperature fallen at all but our western and northern stations; readings over the United Kingdom ranging at 8 a.m. from 47° at Valencia to 33° at Oxford. Maxima very low generally, and sharp frost occurring at night at all but our west coast stations.

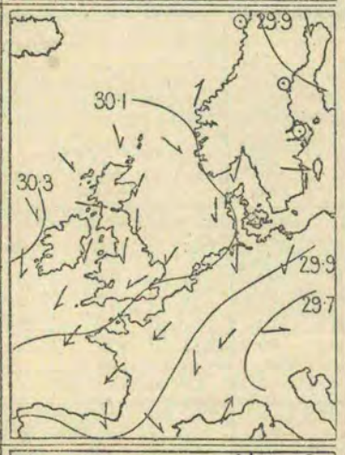
Wind Northerly or North-Westerly in our Islands and also on the eastern shores of the North Sea, but North-Easterly in France and the north of Spain; fresh or strong in force over Ireland and the west of Scotland.

Sea rather rough at Valencia, but moderate to smooth elsewhere.

Barometer rising in Scandinavia and also in the west of France, but falling elsewhere. Pressure highest to the westward of our Islands, and lowest in the extreme south of France, but shallow depressions lying respectively over Wales and off the north-east of England. Depressions subsequently moving southwards, and barometer falling a little in France.







Thursday, April 5.

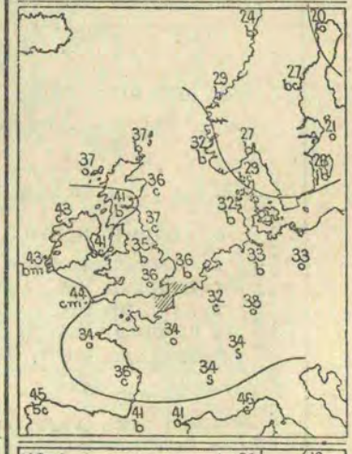
Weather fair generally, but showers of hail or sleet reported in the south of England. Cold showers falling later at several of our northern stations.

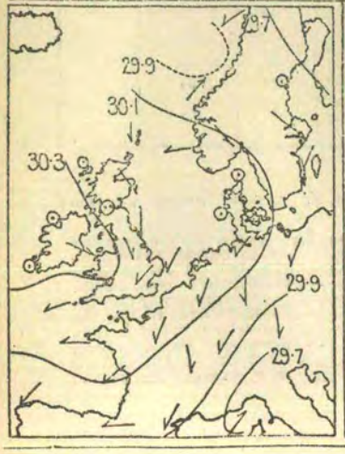
Temperature risen in most places; readings over our Islands ranging at 8 a.m. from 44° at Scilly to 35° at Nairn and York and 31° at Parsonstown. Maxima below 45° at most of the English stations, with sharp frosts at night.

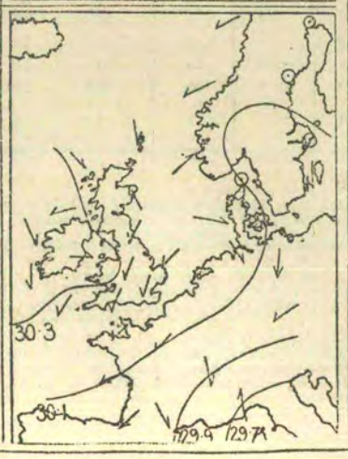
Wind light from North-West or North on our northern coasts, but fresh or strong from the North-Eastward at our southern and most of the French stations.

Sea moderate in the south, but slight or smooth elsewhere.

Barometer rising generally. Pressure highest over our western coasts and lowest over Switzerland and the south-east of France. Slight fall taking place later at several of our northern stations.







Friday, April 6.

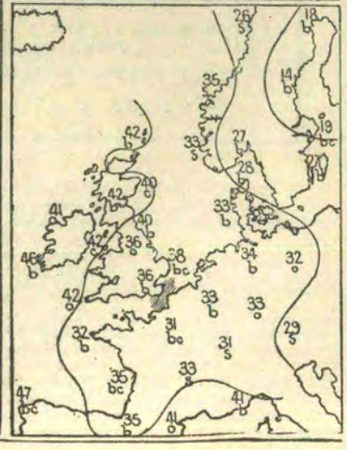
Weather fair in our Islands, but snow reported in the west of Norway, South Germany, and the east of France.

Temperature risen a little in the west and north of our Islands, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 46° at Valencia to 31° at Loughborough. Sharp frost again experienced over England at night.

Wind light North-Westerly on our northern coasts, but fresh from North-East over the Channel and Bay of Biscay. Calms or light Northerly airs reported in Sweden and Denmark. Subsequently becoming variable in the north of our Islands.

Sea moderate in the south and east, but slight or smooth elsewhere.

Barometer rising generally. Anticyclone lying over Ireland and Wales, with a shallow depression off the north-west of Norway, and a deeper disturbance over the south of Spain. No important change later.

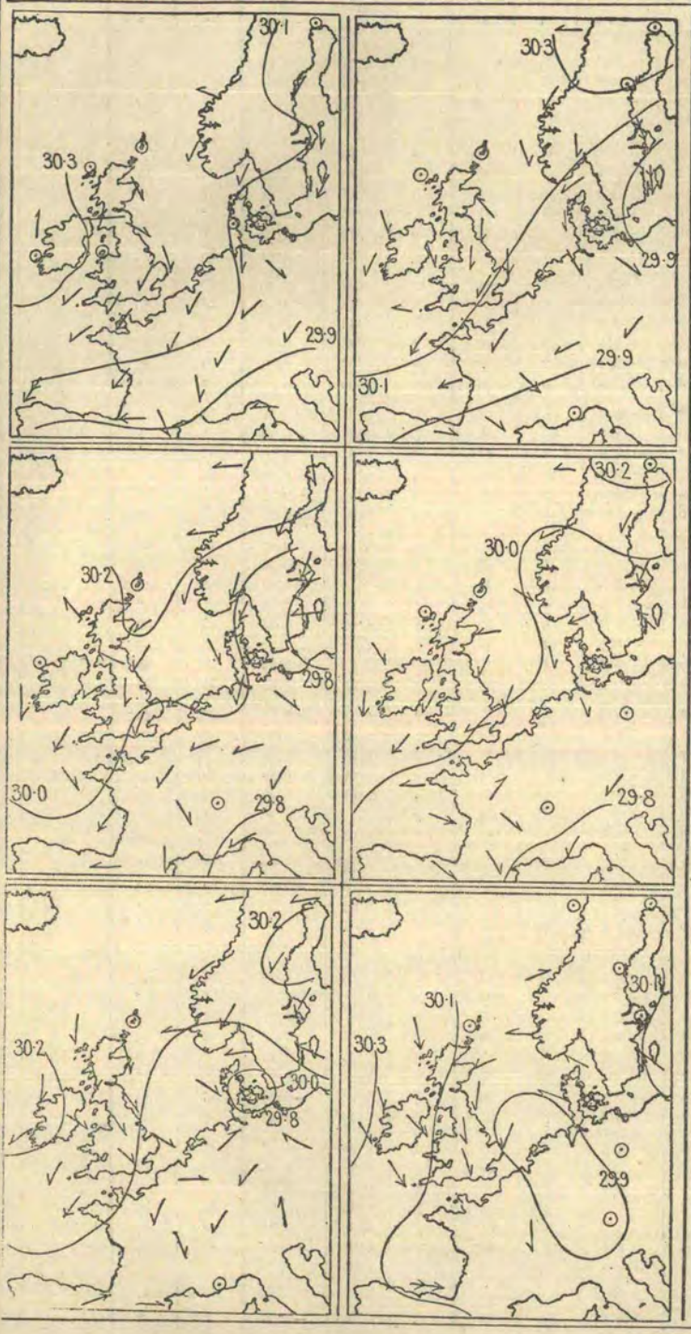


SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, April 7.

Weather fair generally but dull in places and foggy at some of the English stations. Rain or sleet falling in the south-east of England at night.

Temperature risen slightly in most places; readings over our Islands ranging at 8 a.m. from 49° at Mullaghmore to 31° at Loughborough. Maxima over England somewhat higher than of late, but slight frost occurring at night.

Wind light and variable in the north of our Islands, but North-Easterly at our southern and the French stations, and chiefly Northerly elsewhere.

Sea moderate in the Channel, but slight or smooth elsewhere.

Barometer falling a little at all but the Scandinavian stations. Anticyclone lying over Ireland, with areas of low pressure over the Gulf of Bothnia, the Baltic, and the south of Spain. Brisk rise taking place later over the north of Scandinavia, but barometer continuing to fall elsewhere.

Sunday, April 8.

Weather fine in the west and north of our Islands, and also in Norway, but cloudy elsewhere, with snow showers over our midland and south-eastern counties as well as at several of the Continental stations.

Temperature changed irregularly; readings over our Islands ranging at 8 a.m. from 45° at Mullaghmore and Valencia to 34° at Dungeness and in London. Slight frost occurring at night in most parts of the United Kingdom.

Wind light South-Easterly in the north of our Islands, but fresh Northerly or North-Easterly elsewhere.

Sea rather rough at Yarmouth, but slight or smooth at all other stations.

Barometer falling at all but the Spanish and southern French stations. Pressure highest in the north of Scandinavia, and high in the west and north of our Islands, but a depression reported over the Baltic, and low pressures over the south of Spain. Baltic depression subsequently moving slowly westwards.

Monday, April 9.

Weather fair over the greater part of Western Europe, but snow showers falling in the east of England, and rain at Biarritz. Cold showers falling later in many parts of the United Kingdom.

Temperature changed irregularly; readings over our Islands ranging at 8 a.m. from 47° at Belmullet and Valencia to 34° at Hurst Castle, Dungeness, and Oxford, and 30° at Parsonstown. Slight frost occurring over England at night.

Wind moderate Northerly or North-Westerly in our Islands, and North-Easterly in France, but light Easterly in Scandinavia and South-Easterly in Germany.

Sea smooth generally.

Barometer falling a little over Great Britain and the eastern shores of the North Sea, but rising elsewhere. Pressure high over the Gulf of Bothnia and the west of Ireland, but shallow depressions lying respectively over the south of Denmark and the south-west of France. Danish depression subsequently moving south-westwards, and barometer rising again on eastern shores of North Sea.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 53 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ℳ	45	29	42·3	31·3	36·5	− 4·8	1	36	3	0·21	−0·32	*	*
	Stornoway ℳ	50	30	46·9	35·9	41·1	− 1·6	14	23	5	0·32	−0·33	23	25
	Wick ℳ	49	25	46·1	30·4	37·9	− 3·8	11	41	5	0·38	0·00	*	*
	Lairg ℳ	49	26	44·6	30·9	37·4	− 4·0	7	38	2	0·25	−0·27	*	*
	Glencarron ℳ	51	26	46·2	30·9	38·2	− 4·0	12	39	5	0·32†	?	?	?
	Fort Augustus ℳ	49	24	45·9	29·5	37·3	− 5·9	11	44	3	0·09†	?	*	*
1. SCOTLAND, E.	Nairn ℳ	52	26	46·0	31·3	38·3	− 4·6	11	38	4	0·21	−0·11	*	*
	Aberdeen ℳ	50	30	44·7	32·6	38·4	− 3·6	8	33	5	0·44	−0·07	34	37
	Braemar ℳ	47	23	43·6	27·8	35·3	− 4·4	4	48	3	0·05	−0·49	37‡	40‡
	Ochtertyre ℳ	?58	24	?52·4	29·3	?40·3	− 2·9	?35	?42	1	0·02	−0·52	*	*
	Leith ℳ	48	27	46·4	31·3	38·5	− 6·0	12	38	3	0·14	−0·22	*	*
	Marchmont ℳ	47	29	44·3	30·3	37·0	− 5·7	6	40	3	0·22	−0·34	38	41
2. ENGLAND, N.E.	Alnwick Castle	43	29	40·3	31·6	35·7	− 7·3	0	44	2	0·07	−0·45	*	*
	Durham	49	28	42·8	29·7	35·9	− 7·3	2	41	3	0·16	−0·34	28	30
	Shields	46	31	43·6	32·6	37·8	− 6·9	4	32	3	0·14	−0·27	*	*
	Scarborough ℳ	45	30	41·9	31·7	36·6	− 7·0	0	38	4	0·33	−0·11	28‡	30‡
	York	50	28	45·3	30·6	37·6	− 7·4	9	40	3	0·07	−0·34	29	32
	Spurn Head	45	32	42·0	33·0	37·3	− 7·0	0	33	3	0·09	?	*	*
3. ENGLAND, E.	Hillington ℳ	47	22	44·3	28·2	35·9	− 8·2	6	47	5	0·31	−0·09	44	48
	Yarmouth	43	30	40·6	31·9	36·0	− 8·7	0	42	5	0·27	−0·14	*	*
	Geldeston	45	27	42·3	29·2	35·4	−10·2	1	43	6	0·35	0·00	43	47
	Cambridge	49	23	46·3	26·9	36·1	− 9·6	12	52	4	0·13	−0·25	40	43
	Rothamsted	46	25	42·6	28·8	35·4	−10·0	2	45	4	0·15	−0·33	*	*
	Ingatestone	46	27	43·0	28·8	35·6	− 9·9	3	45	3	0·06	−0·28	30‡	33‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	50	25	45·3	28·0	36·2	− 8·4	9	48	4	0·08	−0·32	25‡	27‡
	Loughborough	53	25	46·0	29·9	37·6	− 7·9	11	43	4	0·06	−0·33	*	*
	Leicester	52	25	45·5	29·6	37·2	− 7·8	10	43	6	0·15	−0·25	15	16
	Cheadle ℳ	47	27	43·6	28·9	35·9	− 7·6	4	45	1	0·01	−0·50	*	*
	Churchstoke ℳ	50	23	44·3	27·3	35·4	− 9·7	6	50	1	0·07	−0·33	33	36
	Hereford ℳ	51	28	46·4	30·3	38·0	− 8·1	12	42	2	0·11	−0·29	*	*
	Cirencester	47	23	43·6	28·9	35·9	− 9·3	4	45	1	0·01	−0·49	36	39
	Oxford	48	26	44·3	29·6	36·6	−10·0	6	43	2	0·05	−0·35	34	37
5. ENGLAND, S.	London	46	29	43·3	31·1	36·9	−10·2	4	37	2	0·11	−0·31	23‡	25‡
	Strathfield Turgiss ℳ	47	24	44·7	28·7	36·3	− 9·6	8	46	1	0·07	−0·35	*	*
	Dungeness	44	26	42·9	30·7	36·5	− 5·8	3	38	2	0·06	−0·36	*	*
	Hastings (St. Leonard's)	45	29	42·5	30·7	36·3	− 9·2	1	38	4	0·12	−0·34	39	42
	Southampton	49	27	46·3	30·0	37·8	− 8·9	12	43	1	0·01	−0·47	40	43
	Hurst Castle	46	30	44·0	32·3	37·9	− 9·4	6	34	0	—	−0·43	*	*
	Stowell ℳ	47	27	42·5	29·8	35·9	− 9·3	1	41	3	0·05	?	30‡	34‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	50	29	47·4	34·5	40·6	− 3·2	15	28	4	0·12†	−0·89	*	*
	Glasgow	50	29	46·7	31·8	38·9	− 5·2	13	37	2	0·03	−0·50	20	22
	Ardrossan	50	30	47·9	32·9	40·0	− 4·2	17	33	1	0·02	−0·51	*	*
	Glenlee ℒ	52	25	46·5	28·4	37·0	− 7·2	13	48	1	0·01	?	*	*
	Douglas (Isle of Man)	50	31	46·7	33·4	39·7	− 6·1	13	31	2	0·03	−0·53	57	62
7. ENGLAND, N.W.	Newton Reigny (Penrith)	48	25	43·6	28·2	35·5	− 8·0	4	47	2	0·05	−0·38	20	22
	Barrow-in-Furness	48	32	46·3	33·1	39·3	− 7·0	12	31	0	—	−0·46	*	*
	Stonyhurst	49	29	44·5	29·9	36·9	− 7·9	7	42	0	—	−0·57	32	35
	Blackpool ℳ	46	31	43·1	32·0	37·3	− 8·8	3	34	0	—	−0·42	33	36
	Manchester	49	29	44·4	30·6	37·4	− 6·8	7	41	2	0·05	−0·45	*	*
	Liverpool Obsy (Bidston)	47	31	44·0	33·3	38·4	− 7·4	6	30	0	—	−0·37	*	*
	Llandudno ℳ	49	32	44·2	35·0	39·4	− 7·4	6	25	2	0·12	−0·28	45	49
	Holyhead	49	35	44·6	35·9	40·0	− 6·8	7	21	3	0·06	−0·38	*	*
8. ENGLAND, S.W.	Llandovery	54	25	47·4	29·1	37·8	− 7·8	15	46	2	0·08	−0·59	*	*
	Pembroke	46	33	44·3	34·6	39·2	− 8·4	6	26	1	0·04	−0·46	43	47
	Arlington (N. Devon)	48	26	43·3	29·9	36·5	− 9·6	4	43	4	0·13	−0·58	*	*
	Cullompton ℳ	49	25	44·8	30·6	37·4	− 9·2	8	40	2	0·03	−0·57	43	47
	Falmouth	45	30	43·4	33·0	38·0	− 4·7	4	31	2	0·02	−0·73	45	49
	Plymouth	48	31	46·2	34·0	39·8	− 3·2	12	29	1	0·02	−0·57	46	50
	Prawle Point	50	29	44·6	31·4	37·7	− 4·3	7	37	1	0·03	?	*	*
9. IRELAND, N.	Malin Head	48	36	45·3	38·1	41·5	− 2·8	9	15	5	0·10	?	*	*
	Londonderry	54	30	48·7	33·9	40·9	− 4·2	19	30	3	0·21	−0·36	*	*
	Mullaghmore	50	33	47·9	36·9	42·1	− 4·2	22	14	1	0·05	−0·45	*	*
	Belmullet	50	36	47·6	39·1	43·2	− 3·8	21	8	5	0·45	?	*	*
	Markree Castle	50	24	47·4	31·4	39·0	− 6·4	15	38	3	0·19	−0·38§	18	20
	Brookeborough	52	24	46·3	27·9	36·7	− 8·1	12	50	3	0·29	?	*	*
	Armagh	52	26	48·4	30·2	38·9	− 6·5	18	43	2	0·03	−0·47	27	29
	Donaghadee	49	34	46·1	36·6	41·1	− 4·9	11	20	1	0·07	−0·38	*	*
	Edgeworthstown	51	25	47·4	29·1	37·8	− 6·8	15	46	3	0·11	−0·47	*	*
10. IRELAND, S.	Dublin	50	29	46·4	34·3	40·1	− 6·7	12	28	5	0·26	−0·22	40	43
	Parsonstown	51	23	47·4	29·6	38·1	− 7·6	15	44	3	0·11	−0·39	27	29
	Kilkenny	53	23	47·4	31·6	39·1	− 6·3	15	37	4	0·13	−0·38	*	*
	Waterford	53	24	48·3	30·0	38·7	− 8·3	18	43	3	0·03	−0·65	*	*
	Roche's Point	52	32	48·3	35·6	41·7	− 5·4	18	25	3	0·38	−0·43	*	*
	Valencia	51	33	49·4	36·0	42·4	− 5·4	23	17	3	0·06	−0·89	47	51
	Killarney	51	25	48·8	30·9	39·4	− 7·2	19	40	4	0·32	?	*	*
	Foynes	51	34	49·1	33·8	43·7	− 2·3	25	9	2	0·09	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	46	36	44·4	38·1	41·1	− 7·5	7	14	3	0·26	−0·31	*	*
	Jersey (Noirmont)	46	34	43·7	35·4	39·4	− 7·9	5	23	3	0·09	−0·40	50	54

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ℒ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

§ The "Difference from the Mean for the Week" at Markree Castle in the Rainfall Column for last week should read "+0·05."

NOTE.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 15.] *Second Series.* WEEK ENDING MONDAY, 16TH APRIL, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

DISTRICTS. (See p. 60.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
	°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	57	29	48·3	37·1	42·4	1 below.	23	+ 2	14	− 3	76	− 69	631	+181
1. SCOTLAND, EAST	62	31	52·6	36·8	44·3	1 above.	38	+10	15	− 1	104	− 91	628	+129
2. ENGLAND, N.E.	62	28	52·5	38·3	45·1	0 (average).	37	+ 9	10	− 3	99	−100	527	+ 82
3. ENGLAND, EAST	66	28	54·1	37·2	45·2	2 below.	43	+ 6	13	− 1	117	−151	625	+158
4. MIDLAND COUNTIES	63	29	54·3	38·8	46·2	1 below.	43	+ 4	9	− 6	132	−161	623	+164
5. ENGLAND, SOUTH	63	30	52·9	38·8	45·5	3 below.	38	− 4	9	− 1	126	−188	565	+215
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	60	34	50·4	40·7	45·3	0 (average).	29	− 4	4	− 8	118	−107	477	+110
7. ENGLAND, N.W.	59	33	51·1	40·6	45·6	1 below.	31	− 3	4	− 7	95	−135	434 *	+128
8. ENGLAND, S.W.	59	34	52·1	41·6	46·6	2 below.	34	− 5	1	− 6	148	−202	473	+260
9. IRELAND NORTH	61	35	53·1	42·4	47·5	1 above.	39	+ 3	0	−10	168	−115	393	+ 69
10. IRELAND, SOUTH	62	29	55·0	44·5	49·4	2 above.	52	+11	0	− 8	240	−147	351	+128
— CHANNEL ISLANDS	59	39	51·6	43·5	47·4	2 below.	38	− 4	0	− 1	212	−191	247	+155

Rainfall. Bright Sunshine.

DISTRICTS. (See p. 60.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
		10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	7	12	6 more.	73	+ 4	11·6	−1·7	17	17	247	−21	23	− 3
1. SCOTLAND, EAST	5	6	1 more.	63	+10	7·7	−0·5	37	38	260	−47	24	− 5
2. ENGLAND, N.E.	5	4	0 (average).	57	+ 5	6·3	−0·5	34	35	258	+ 8	24	+ 1
3. ENGLAND, EAST	4	3	1 less.	59	+ 7	5·7	−0·8	35	37	251	−78	23	− 7
4. MIDLAND COUNTIES	5	4	0 (average).	51	+ 1	5·1	−2·4	22	23	237	−61	21	− 5
5. ENGLAND, SOUTH	5	4	0 (average).	53	+ 4	6·3	−1·5	22	23	217	−87	20	− 8
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	6	13	6 more.	49	−12	10·1	−3·2	25	26	306	+34	28	+ 3
7. ENGLAND, N.W.	6	7	2 more.	58	+ 3	5·7	−3·6	20	21	270	+ 8	25	+ 1
8. ENGLAND, S.W.	6	6	1 less.	56	− 2	8·0	−4·8	17	19	315	−15	29	− 1
9. IRELAND, NORTH	6	6	1 more.	56	−10	8·0 *	−1·9	19	20	240	−52	22	− 5
10. IRELAND, SOUTH	5	5	2 less.	49	−14	8·4	−3·8	24	26	322	−10	29	− 2
— CHANNEL ISLANDS	6	5	0 (average).	70	+ 6	8·1	−1·8	19	20	308	−97	28	− 8

General Remarks.

Weather continued cold with some falls of rain, sleet, or snow, during the earlier days of the period, but subsequently became mild and seasonable, warm showers alternating with bright intervals of sunshine.

Temperature remained very low until the 12th, when it rose rapidly and became high for the time of year. The average for the week has consequently been rather above the normal in Ireland, as well as in the east of Scotland and at most stations in the west of Scotland and north of England, but elsewhere a deficit is still shown. The highest of the maxima, which were registered either on the 14th or 15th, varied from 57° in "Scotland, N." to 63° in the "Midland Counties" and "England, S.", and to 66° in "England, E." The lowest of the minima were recorded on the 10th, when the thermometer fell to between 28° and 31° in the "Wheat-producing" districts and to between 29° and 35° in the "Grazing" districts. In the "Channel Islands" the lowest reading was 39°.

Rainfall has been more than the mean in the north and west of Scotland, but in other parts of our Islands it has not differed much from the normal value.

Bright sunshine has been rather deficient except in the north-eastern and eastern parts of the Kingdom. The percentage of the possible amount of duration ranged from 17 in "Scotland, N." and 19 in "England, S.W." to 35 in "England, N.E.", 37 in "England, E.", and 38 in "Scotland, E."

Depressions observed.—At the commencement of the period pressure was highest off our western coasts, while depressions were shown in the more northern and eastern parts of our area. As the week progressed, however, the high pressure area moved south-eastwards to the Bay of Biscay and France and depressions appeared on our north-western coasts from the Atlantic. Towards the end of the period a second high pressure area was formed over Sweden and the Gulf of Bothnia, while depressions, moving in a northerly direction, skirted our western coasts, and some shallow subsidiary disturbances appeared over our Islands and the North Sea. The winds, which were at first Northerly, subsequently backed to North-West and West and finally became South-Westerly or Southerly, and over our more western districts blew freshly or strongly.

* This value has been altered owing to the receipt of further information.

A 54004. 350.—4/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

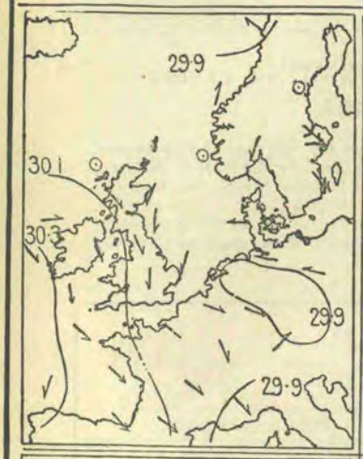
Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Tuesday, April 10.

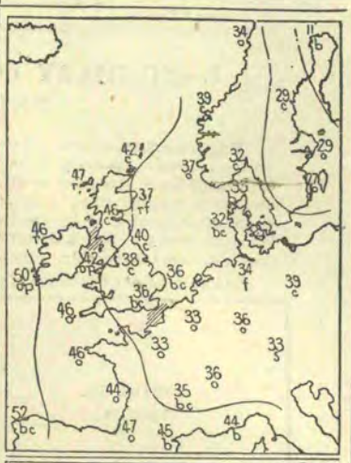
Weather dull and showery at our western and northern stations, but fair in most other localities. Showery weather extending later to nearly all parts of Western Europe.

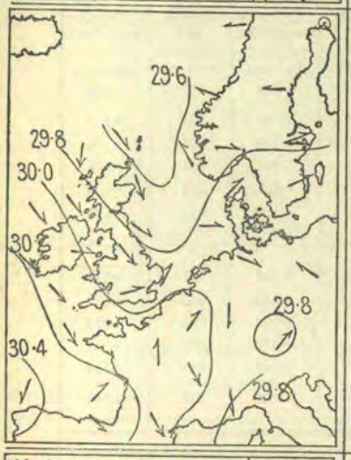
Temperature risen a little at all but the Swedish and eastern French stations; readings over our Islands ranging at 8 a.m. from 50° at Valencia to 34° at Dungeness.

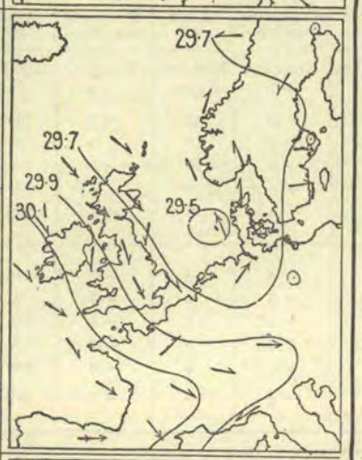
Wind fresh Northerly or North-Westerly over the greater part of England, Ireland, and France, but light and variable in Scandinavia and Scotland, and Easterly in Denmark and North Germany. South-Westerly breezes subsequently setting in on our northern coasts.

Sea moderate to smooth.

Barometer rising at all but the extreme northern stations. Pressure highest in an anticyclone lying to the south-westward of our Islands; shallow depressions situated respectively over Germany, the Gulf of Genoa, and the north-west of Norway. Another disturbance appearing later over our northern coasts.







Wednesday, April 11.

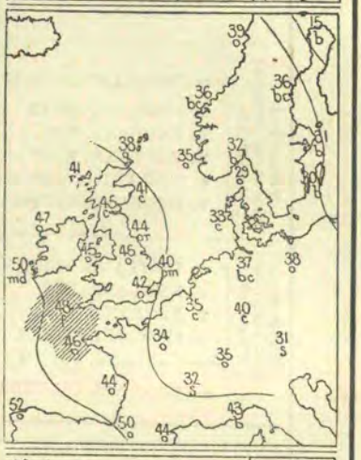
Weather fine in Scandinavia and fair in the north of our Islands, but cloudy and unsettled elsewhere, with mist and rain in many places, and snow at Lyons and Munich. Some improvement taking place over England and Ireland later.

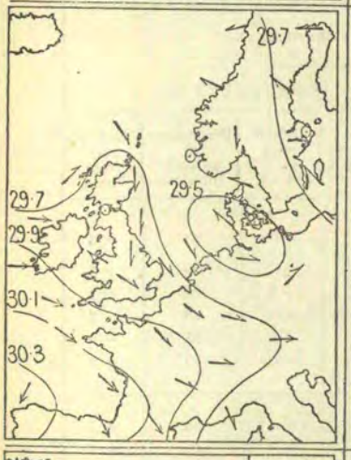
Temperature fallen a little on our north-west coasts as well as in Germany and the south of France, but risen elsewhere; readings over our Islands ranging at 8 a.m. from 50° at Valencia to 38° in the Shetlands.

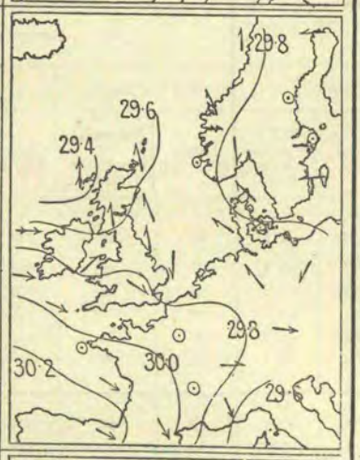
Wind fresh North-Westerly at all our more northern stations as well as in the south of France, but moderate South-Westerly or Westerly in intermediate localities, and Easterly in Norway. Subsequently veering to North-West on our southern coasts.

Sea rather rough at Scilly, but moderate to smooth elsewhere.

Barometer falling at all but the French stations. Anticyclone lying off the north-west of Spain, with a well-defined "V-shaped" depression near the Shetlands, and other disturbances over Sweden, South Germany, and the Gulf of Genoa. Another small disturbance appearing later off the Danish coasts.







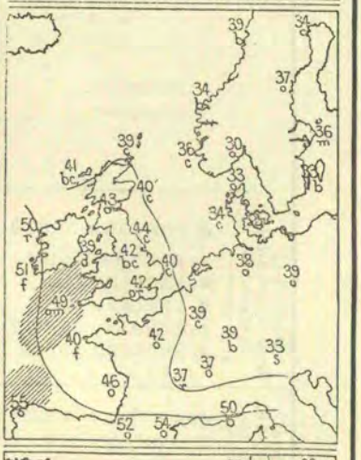
Thursday, April 12.

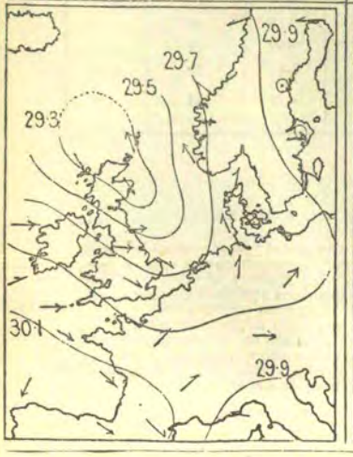
Weather fine in Scotland and the west of Norway, but dull elsewhere, with rain in many places; readings over our Islands ranging at 8 a.m. from 51° at Valencia to 39° at Sumburgh Head and Holyhead and 38° at Nairn.

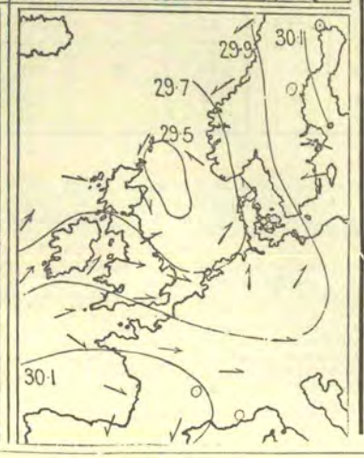
Wind light South-Easterly on the eastern shores of the North Sea, and variable in Scotland, but moderate or fresh from West or North-West elsewhere. Subsequently increasing to slight gale from the Southward in the north and east of Scotland.

Sea rather rough off the south-west of England, but moderate to smooth elsewhere.

Barometer falling in most places. Anticyclone still lying off the north-west of Spain, with a well marked depression over the south of Denmark, and shallow disturbances off the west coast of Scotland and Norway. Danish and Norwegian depressions subsequently filling up, but low pressure system off the west of Scotland growing deeper.







Friday, April 13.

Weather rainy in the north of Scotland, but fair or fine in most other localities. Subsequently becoming dull and unsettled on our western coasts.

Temperature risen generally; readings over our Islands ranging at 8 a.m. from 53° in London and 52° at Valencia to 37° in the Shetlands. Subsequently rising to 60° at Oxford and Cambridge and 61° in London.

Wind fresh or strong from the Westward over our Islands and France, but South-Easterly on the eastern shores of the North Sea, and Easterly in Sweden. Backing to South-West on our west coast later.

Sea high at Sumburgh Head and rough at several of our western and extreme northern stations.

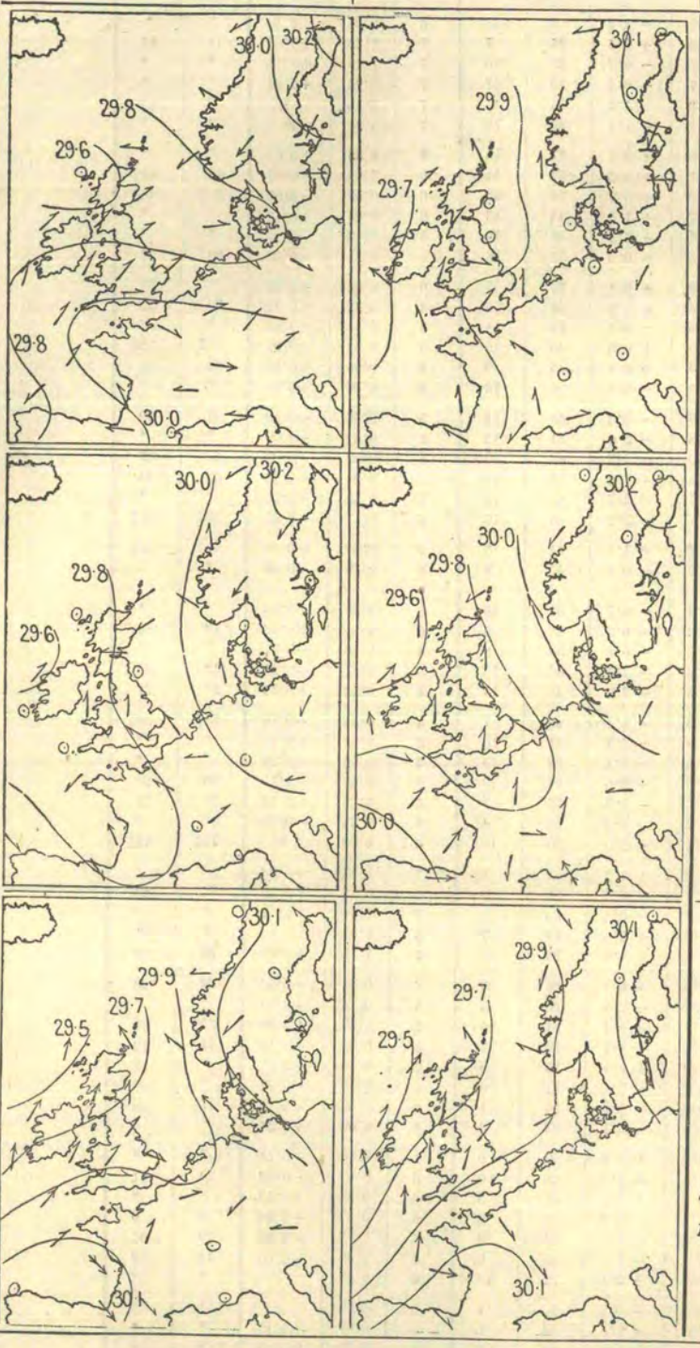
Barometer falling over the North Sea and the adjacent coasts, but rising elsewhere. Pressure highest over the southern parts of the Bay of Biscay, and high over Northern Europe, but rather deep depression lying over the north of Scotland. Depression subsequently moving eastwards and partially dispersing, but fresh fall of barometer setting in over Ireland.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, April 14.

Weather fine in the south-east of England, but cloudy in most other localities, with fog at several of our western and south-western stations. Rain falling in Ireland later.

Temperature fallen a little at some of our south-western and southern stations, but risen elsewhere; readings over our Islands ranging at 8 a.m. from 52° at Valencia to 40° in the Shetlands. Subsequently rising to 61° at York, Loughborough, and Cambridge and 62° at Leith and in London.

Wind Easterly in Scandinavia and the south of France, but South-Westerly or Westerly elsewhere; light or moderate in force generally. Subsequently backing to the South-Eastward on our western coasts.

Sea rather rough at Scilly, but moderate to smooth elsewhere.

Barometer rising at all but our south-western and the French stations. Pressure high over northern Europe and also in the south of France, but depressions lying over Portugal, the west of Scotland, and the west of Denmark. Portuguese disturbance subsequently moving slowly north-eastwards.

Sunday, April 15.

Weather fair at our south-eastern and many of the Continental stations, but cloudy or overcast elsewhere, with showers on our western coasts and rain in the north of Spain and south of France. Rain falling later in most parts of the United Kingdom and France.

Temperature fallen a little in our Islands, but risen at most of the Continental stations; readings over the United Kingdom ranging at 8 a.m. from 53° at Cambridge to 41° at Sumburgh Head. Subsequently rising to 62° at Loughborough, 63° in London, and 66° at Cambridge.

Wind North-Westerly in Spain, but South-Easterly elsewhere; moderate and fresh in force generally.

Sea rather rough at Scilly and Lisbon, but slight or smooth elsewhere.

Barometer falling at all but the Scandinavian and Danish stations. Pressure highest in the north of Sweden, with a depression off the west of Ireland, and a secondary disturbance off the north-west of France. Latter system subsequently advancing over the south of England.

Monday, April 16.

Weather fair generally, but foggy off the east of England, and showery at some of our western and northern stations. Rain falling later on all but our eastern coasts.

Temperature changed irregularly; readings over our Islands ranging at 8 a.m. from 52° at Scilly and 51° at Valencia to 42° in the Shetlands. Subsequently rising to 61° at Loughborough and Cambridge and 62° in London.

Wind Southerly or South-Westerly in our Islands, but South-Easterly on the eastern shores of the North Sea, and North-Westerly in the south of France; strong in force at some of our western stations, but light or moderate elsewhere.

Sea rough on our extreme northern and south-western coasts.

Barometer falling a little over Scotland and the eastern shores of the North Sea, but rising elsewhere. Pressure highest in Spain, and high in Sweden, with a depression off the west of Scotland, and a secondary disturbance over the North Sea. New disturbance appearing off the west of Ireland later.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 57 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ℳ	47	35	43·9	36·9	40·2	− 2·2	5	18	6	0·90	+0·40	*	*
	Stornoway ℳ	55	35	49·1	39·6	44·2	+ 0·5	25	7	7	1·53	+0·95	17	17
	Wick ℳ	55	32	49·4	36·6	42·7	− 0·2	28	15	7	1·19	+0·83	*	*
	Lairg ℳ	57	29	49·9	36·1	42·7	+ 0·2	30	17	7	0·74	+0·24	*	*
	Glencarron ℳ	53	30	47·7	36·6	41·9	− 1·2	16	21	7	1·99†	?	?	?
	Fort Augustus ℳ	55	30	49·9	36·6	42·9	− 1·7	29	15	7	0·90†	?	*	*
1. SCOTLAND, E.	Nairn ℳ	59	33	52·4	37·0	44·3	+ 0·1	37	14	6	0·39	+0·09	*	*
	Aberdeen ℳ	60	34	52·0	36·9	44·1	+ 0·5	36	14	6	0·68	+0·17	40	41
	Braemar ℳ	55	32	49·3	35·2	41·9	+ 0·7	20	26	6	0·53	−0·02	39‡	40‡
	Ochtertyre ℳ	61	31	54·6	37·6	45·7	+ 1·2	44	12	6	0·95	+0·42	*	*
	Leith ℳ	62	34	55·4	38·4	46·5	+ 1·1	47	10	3	0·12	−0·27	*	*
	Marchmont ℳ	59	31	52·1	35·6	43·5	− 0·3	37	18	5	0·71	−0·13	33	34
2. ENGLAND, N.E.	Alnwick Castle	58	35	51·3	39·6	45·2	+ 0·7	32	7	6	0·52	−0·02	*	*
	Durham	62	30	54·2	37·6	45·5	+ 0·8	43	12	4	0·33	−0·19	34	35
	Shields	60	32	51·9	38·0	44·6	− 0·4	35	11	5	0·41	−0·04	*	*
	Scarborough ℳ	61	33	52·6	38·4	45·5	+ 0·5	40	10	4	0·36	−0·09	32‡	33‡
	York	61	28	55·1	38·7	46·5	+ 0·1	45	9	5	0·45	+0·02	35	36
	Spurn Head	58	31	49·6	37·7	43·4	− 2·4	28	12	5	0·46	+0·09	*	*
3. ENGLAND, E.	Hillington ℳ	63	30	54·8	37·6	45·8	− 0·6	45	12	5	0·32	−0·10	37	39
	Yarmouth	59	32	50·6	37·7	43·8	− 3·0	31	12	3	0·32	−0·09	*	*
	Geldeston	62	31	53·7	37·0	45·0	− 2·5	42	14	5	0·32	−0·03	37	39
	Cambridge	66	28	56·7	36·9	46·3	− 1·3	52	14	4	0·24	−0·16	32	34
	Rothamsted	60	29	53·9	36·3	44·7	− 2·7	43	16	4	0·40	−0·10	*	*
	Ingatestone	60	30	54·7	37·5	45·7	− 2·2	45	13	4	0·17	−0·21	33‡	35‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	61	37	55·0	41·0	47·7	+ 1·1	44	3	5	0·36	−0·04	24‡	25‡
	Loughborough	62	29	55·7	38·9	46·9	− 0·2	47	9	5	0·39	−0·02	*	*
	Leicester									*				
	Cheadle ℳ	56	31	51·1	38·3	44·4	− 0·7	33	10	6	0·50	+0·09	*	*
	Churchstoke ℳ	59	33	53·7	39·3	46·2	− 0·7	41	8	6	0·46	+0·06	19	20
	Hereford ℳ	63	35	56·5	39·0	47·3	− 0·3	50	8	4	0·20	−0·21	*	*
	Cirencester	63	32	54·4	36·9	45·2	− 1·5	44	14	5	0·31	−0·20	19	20
	Oxford	60	31	54·0	38·3	45·8	− 2·0	42	10	4	0·46	+0·04	26	27
5. ENGLAND, S.	London	63	32	56·4	39·6	47·6	− 1·1	49	7	4	0·24	−0·18	28‡	29‡
	Strathfield Turgiss ℳ	62	32	56·4	37·3	46·4	− 1·1	51	13	5	0·63	+0·18	*	*
	Dungeness	55	30	50·3	37·1	43·4	− 5·4	30	14	3	0·19	−0·23	*	*
	Hastings (St. Leonard's)	56	31	51·5	38·3	44·6	− 3·4	34	10	5	0·38	−0·11	24	25
	Southampton	61	35	53·3	40·4	46·5	− 1·6	38	4	5	0·64	+0·15	26	27
	Hurst Castle	57	34	50·3	40·6	45·2	− 3·4	28	4	5	0·34	−0·10	*	*
	Stowell ℳ	56	32	52·4	38·5	45·1	− 2·0	36	10	6	0·69	?	11‡	12‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	60	34	51·3	41·2	46·0	+ 0·9	31	2	7	1·63†	+0·76	*	*
	Glasgow	58	35	50·9	40·5	45·5	+ 0·3	31	4	5	0·89	+0·36	22	23
	Ardrossan	51	39	49·1	41·4	45·1	− 0·2	24	2	6	1·24	+0·71	*	*
	Glenlee ℳ	59	37	51·7	39·5	45·3	+ 0·4	34	7	6	1·50	?	*	*
	Douglas (Isle of Man)	55	39	49·2	40·8	44·8	− 1·9	25	3	7	1·22	+0·67	28	29
7. ENGLAND, N.W.	Newton Reigny (Penrith)	59	34	52·0	38·4	44·9	+ 0·1	35	10	6	0·41	−0·02	22	23
	Barrow-in-Furness	53	38	49·4	40·4	44·7	− 2·9	26	4	5	0·75	+0·30	*	*
	Stonyhurst	57	34	51·0	40·4	45·5	− 0·7	31	4	5	1·07	+0·50	20	21
	Blackpool ℳ	58	38	50·5	40·8	45·4	− 2·1	29	3	6	0·58	+0·18	21	22
	Manchester	59	33	52·2	40·3	46·0	+ 0·4	35	5	7	0·80	+0·31	*	*
	Liverpool Obsy (Bidston)	58	37	51·1	41·1	45·9	− 1·1	31	3	6	0·35	−0·02	*	*
	Llandudno ℳ	58	37	51·9	41·7	46·6	− 1·6	33	1	6	0·82	+0·42	17	18
	Holyhead	54	38	51·0	41·3	45·9	− 2·1	30	2	6	0·69	+0·27	*	*
8. ENGLAND, S.W.	Llandovery	59	34	54·4	41·9	47·9	+ 0·3	42	0	7	0·79	+0·13	*	*
	Pembroke	48	40	47·6	43·0	45·2	− 3·4	22	0	5	0·42	−0·08	20	21
	Arlington (N. Devon)	56	37	51·0	40·1	45·3	− 2·2	31	5	6	0·83	+0·12	*	*
	Cullompton ℳ	57	34	54·8	40·9	47·5	− 0·6	43	3	5	0·25	−0·36	8	9
	Falmouth	56	40	52·5	43·8	47·9	− 0·8	41	0	5	0·72	−0·03	29	31
	Plymouth	58	37	53·6	42·6	47·8	− 1·5	41	0	4	0·54	−0·06	12	13
	Prawle Point	55	34	51·1	38·6	44·6	− 3·4	32	10	6	0·36	?	*	*
9. IRELAND, N.	Malin Head	54	38	49·7	41·7	45·5	− 0·2	26	1	6	0·49	?	*	*
	Londonderry	61	38	54·0	42·6	48·0	+ 1·6	42	0	6	0·67	+0·12	*	*
	Mullaghmore	60	40	53·0	43·6	48·1	+ 0·6	43	0	7	0·80	+0·23	*	*
	Belmullet	54	42	53·0	44·6	48·6	+ 0·8	46	0	7	1·17	?	*	*
	Markree Castle	59	39	53·8	43·2	48·3	+ 1·4	44	0	6	0·83	+0·26	20	21
	Brookeborough	60	36	52·9	41·4	46·9	+ 0·4	37	2	3	0·43	?	*	*
	Armagh	60	37	54·7	41·0	47·5	+ 0·9	43	3	5	0·25	−0·27	18	19
	Donaghadee	58	39	51·7	42·6	46·9	0·0	34	0	6	0·49	+0·03	*	*
	Edgeworthstown	60	35	54·7	40·9	47·5	+ 0·9	43	3	6	0·62	+0·04	*	*
10. IRELAND, S.	Dublin	61	37	55·8	43·8	49·5	+ 1·6	53	0	3	0·48	0·00	32	34
	Parsonstown	62	29	55·9	41·0	48·1	+ 0·9	47	3	6	0·28	−0·22	24	25
	Kilkenny	60	37	56·3	42·6	49·1	+ 2·3	50	0	6	0·29	−0·23	*	*
	Waterford	58	38	55·7	44·0	49·6	+ 1·4	53	0	4	0·31	−0·36	*	*
	Roche's Point	57	36	53·0	44·7	48·7	+ 0·5	47	0	5	0·48	−0·32	*	*
	Valencia	57	42	53·7	46·3	48·8	0·0	48	0	5	0·76	−0·19	17	18
	Killarney	58	41	55·3	46·2	50·5	+ 2·5	60	0	6	0·78	?	*	*
	Foynes	61	42	54·4	47·4	50·7	+ 3·7	61	0	5	0·47	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	55	40	51·6	44·0	47·6	− 1·8	39	0	6	0·48	−0·09	*	*
	Jersey (Noirmont)	59	39	51·6	43·0	47·1	− 1·5	36	0	6	0·59	+0·11	19	20

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ♋ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 16.] *Second Series.* WEEK ENDING MONDAY, 23RD APRIL, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 64.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	58	26	47·0	36·6	41·5	3 below.	14	−11	20	+ 7	90	− 69	651	+187
	1. SCOTLAND, EAST	57	27	47·4	36·9	41·9	3 below.	15	−17	20	+ 8	119	−107	648	+137
	2. ENGLAND, N.E.	60	34	47·2	39·3	43·1	3 below.	19	−14	8	− 2	118	−111	535	+ 78
	3. ENGLAND, EAST	62	33	51·4	40·1	45·5	4 below.	32	−11	5	− 6	149	−156	630	+150
	4. MIDLAND COUNTIES	61	36	50·5	40·4	45·2	3 below.	29	−12	4	− 8	161	−171	627	+154
	5. ENGLAND, SOUTH	59	34	49·6	41·9	45·6	4 below.	26	−21	0	− 7	152	−205	565	+207
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	56	31	48·8	39·0	43·7	3 below.	25	−12	8	− 1	143	−117	485	+109
	7. ENGLAND, N.W.	57	33	49·0	40·6	44·6	3 below.	24	−15	4	− 4	119	−146	488	+121
	8. ENGLAND, S.W.	58	35	50·3	41·3	45·6	4 below.	28	−16	2	− 3	176	−215	480	+255
	9. IRELAND NORTH	58	33	49·0	39·6	44·1	4 below.	25	−15	7	− 1	193	−129	400	+ 68
	10. IRELAND, SOUTH	58	36	50·4	42·0	46·0	3 below.	28	−18	0	− 6	268	−162	351	+123
	— CHANNEL ISLANDS	56	40	51·4	44·1	47·6	2 below.	39	− 8	0	− 1	251	−195	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 64.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	5	5	1 more.	78	+ 5	12·1	−1·6	23	27	275	− 26	24	− 2
	1. SCOTLAND, EAST	6	8	3 more.	69	+13	8·5	−0·1	15	15	275	− 65	24	− 6
	2. ENGLAND, N.E.	7	11	6 more.	64	+ 9	7·4	+0·1	9	9	267	− 7	23	0
	3. ENGLAND, EAST	6	9	5 more.	65	+ 8	6·6	−0·3	14	14	235	− 98	22	− 9
	4. MIDLAND COUNTIES	6	9	4 more.	57	+ 3	6·0	−2·0	15	15	242	− 76	20	− 7
	5. ENGLAND, SOUTH	6	10	6 more.	59	+ 6	7·3	−0·9	16	16	233	−103	19	− 9
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	4	4	0 (average).	53	−12	10·5	−3·3	19	19	325	+ 22	28	+ 2
	7. ENGLAND, N.W.	5	4	1 less.	63	+ 5	6·1	−3·6	17	17	287	− 7	24	− 1
	8. ENGLAND, S.W.	6	7	1 more.	62	+ 1	8·7	−4·7	28	29	343	− 27	29	− 2
	9. IRELAND, NORTH	4	6	1 more.	60	−10	8·6	−1·8	19	19	259	− 69	22	− 6
	10. IRELAND, SOUTH	4	5	1 less.	53	−13	8·9	−3·9	21	21	343	− 24	29	− 2
	— CHANNEL ISLANDS	7	11	6 more.	77	+ 9	9·2	−1·2	30	31	338	−110	28	− 9

General Remarks.

Weather was mild and seasonable as the period commenced, but afterwards became cold and dull very generally, with some falls of sleet at some of our eastern and northern stations, and heavy rain over the south-east of England. During the earlier days of the week thunder and lightning were experienced in some parts of Great Britain.

Temperature has been below the mean in all districts, the deficit ranging from 2° in the "Channel Islands" to 3° or 4° in the other parts of the Kingdom. The highest of the maxima, which were recorded in most places on the 17th, ranged from 56° in "Scotland, W." and the "Channel Islands" to 62° in "England, E." Towards the end of the period the maxima were much lower, being below 50° at nearly all stations, and in several instances below 45°. The absolute minima were generally registered either on the 21st or 22nd, when the thermometer fell to between 26° and 31° in Scotland, and 33° and 36° over England and Ireland. In the "Channel Islands" the lowest reading was 40°.

Rainfall has been more than the mean in all the "Wheat-producing" districts, but in the "Grazing" districts the amount has not differed materially from the normal.

Bright sunshine has been very deficient in all districts, the percentage of the possible amount of duration ranging from 9 in "England, N.E." to 27 in "Scotland, N.", 29 in "England, S.W.", and 31 in the "Channel Islands".

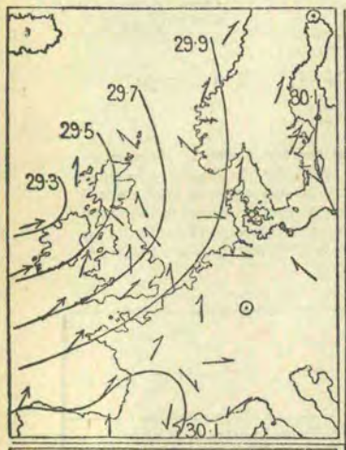
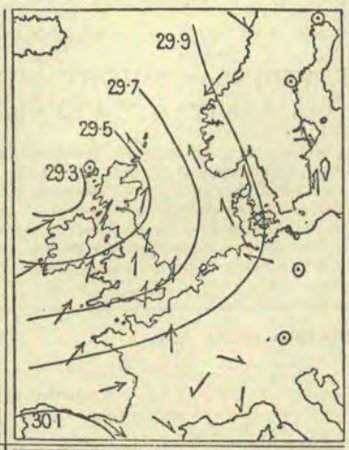
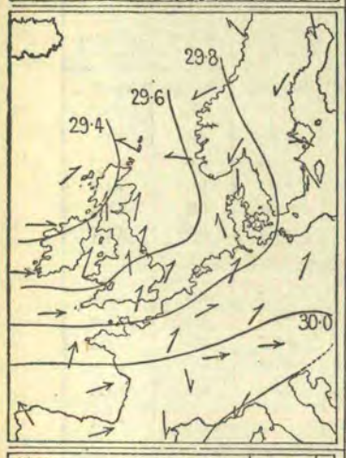
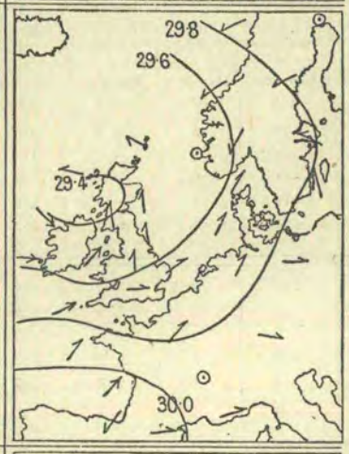
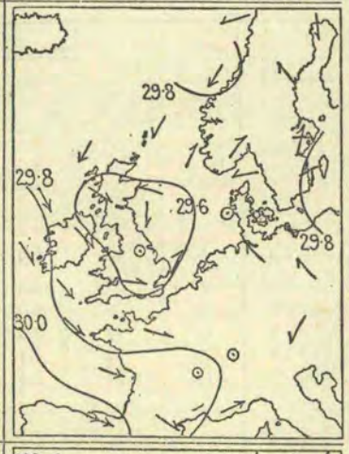
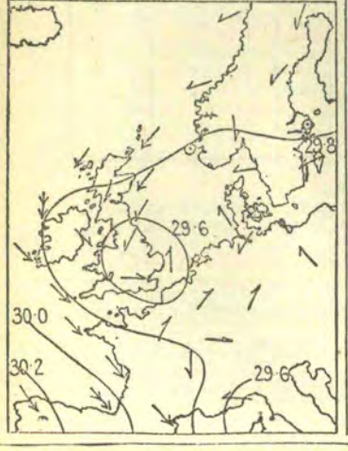
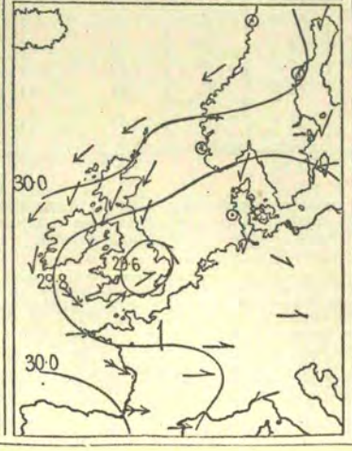
Depressions observed.—Soon after the commencement of the period the centre of a depression advanced to our north-western coasts from the north-westward and subsequently moved very slowly in a south-easterly direction over England to our south-eastern coasts, where it partially dispersed. Other depressions, however, appeared over the Bay of Biscay and our south-western coasts, and at the close of the period an elongated system of low pressure lay over the Channel and extreme south of England, while the barometer had become high over Scandinavia and the north of our Islands. Fresh South-Westerly breezes continued to prevail over the United Kingdom until the 19th, when Northerly (North-West to North-East) winds set in on all but our south and south-east coasts. Towards the end of the week the North-Easterly current extended to the south and south-east also, and blew freshly or strongly. On the 20th the Northerly wind on our north-western coasts attained the force of a gale.

A 54070. 350.—4/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.
	
	
	
	

Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Tuesday, April 17.

Weather fine in Sweden and the south of France, but cloudy or overcast elsewhere, with rain in the north of England and showers at several of our western and southern stations. Thunderstorms experienced later in the north-east of England.

Temperature changed little and irregularly; readings over our Islands ranging at 8 a.m. from 51° at Valencia and Jersey, and 50° at Nairn, to 41° in the Shetlands. Subsequently rising to 60° at York and 62° at Cambridge.

Wind fresh from South-West or South over Ireland, England, and France, but light from the Southward or South-Eastward over our northern coasts and the eastern shores of the North Sea.

Sea rather rough on our extreme south-west coasts.

Barometer falling generally. Pressure highest over Spain, but also high over the Baltic, with a rather deep depression off the north-west of Ireland. Depression subsequently moving slowly northwards, and barometer rising on our western coasts.

Wednesday, April 18.

Weather changeable and showery in all parts of Western Europe. Thunderstorms occurring during the day at several of the English stations.

Temperature risen in Scandinavia and Denmark, but changed irregularly elsewhere; readings over our Islands ranging at 8 a.m. from 51° at Valencia to 41° at Sumburgh Head.

Wind fresh South-Westerly over England, Ireland, and France, but light Southerly in Scotland and moderate South-Easterly on the eastern shores of the North Sea. Subsequently backing to East in the north of Scotland.

Sea rough on our extreme south-west coasts.

Barometer falling over Scandinavia, Denmark, and the east of Great Britain, but rising elsewhere. Pressure highest in Portugal, but relatively high in Sweden, with a depression off the west of Scotland. Depression subsequently moving eastwards.

Thursday, April 19.

Weather fair in the west and north of our Islands; but changeable and showery elsewhere. Showers falling generally later, and thunderstorms occurring in many parts of Great Britain.

Temperature falling a little in most places; readings over our Islands ranging at 8 a.m. from 50° at Valencia and Roche's Point to 40° in the Shetlands.

Wind variable in Scotland, and Northerly or North-Westerly in Ireland, but South-Westerly in most other countries. Subsequently veering to North-West in the west of England.

Sea still rather rough on our extreme south-west coasts.

Barometer rising in the west and north of our Islands, but falling elsewhere. Pressure highest in Portugal. Depression of previous day now lying over Northumberland. Disturbance subsequently moving slowly south-eastwards.

Friday, April 20.

Weather cloudy or overcast generally, with rain in many places.

Temperature fallen in most places; readings over our Islands ranging at 8 a.m. from 46° at Androssan and Scilly to 39° in the Shetlands.

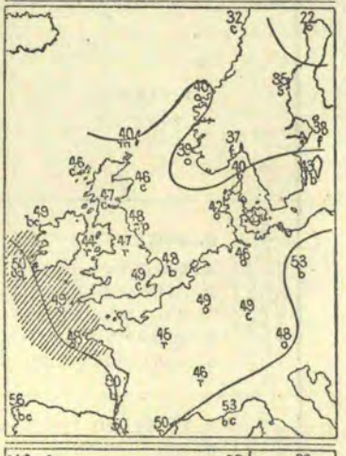
Wind strong from East or North-East in Scotland, and from North or North-West on our extreme west and south-west coasts, but moderate South-Westerly in the south-east of England, and light Southerly over Denmark and the Netherlands.

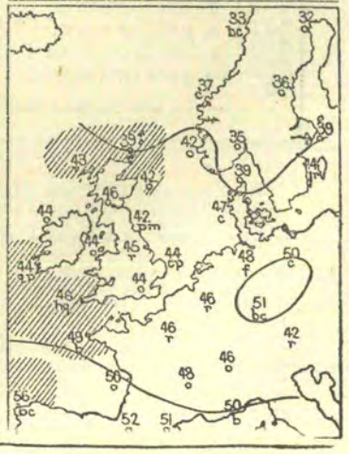
Sea rough off the north and north-east of Scotland, and rather rough off our extreme south-west coasts, but moderate to smooth elsewhere.

Barometer falling a little in Denmark, the Netherlands, and the south-east of England, but rising elsewhere. Pressure still highest in Portugal, but high to the northward of our Islands; depression of previous two days now lying over Lincolnshire. Slight fall taking place in France later.

Synoptic Charts.

TEMPERATURE AND WEATHER at 8 a.m.



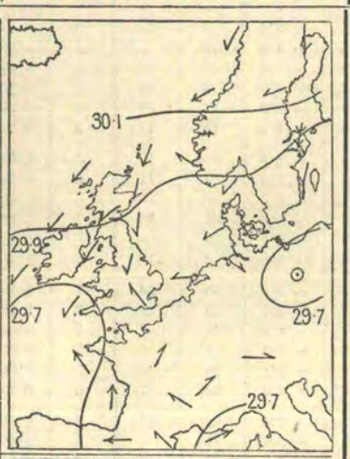


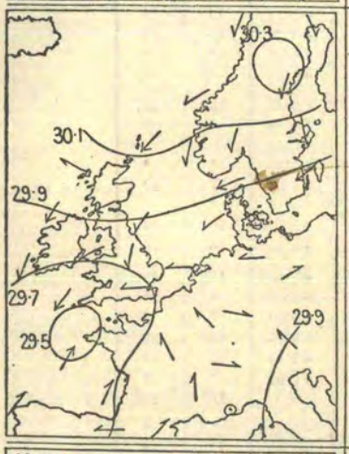
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

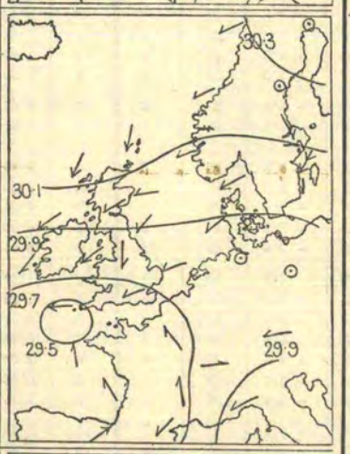
Synoptic Charts.

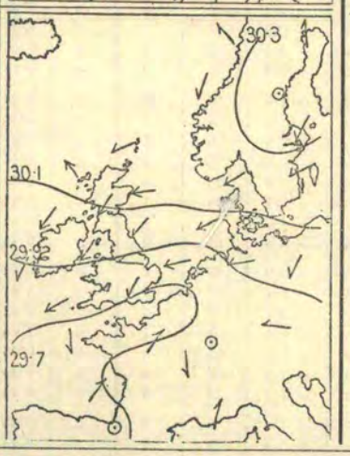
PRESSURE AND WIND.

8 a.m. | **6 p.m.**









Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, April 21.

Weather cloudy in most places, with sleet and hail in Scotland, and rain in the north of England. Some improvement taking place over our Islands later.

Temperature fallen a little generally; readings over the United Kingdom ranging at 8 a.m. from 47° at Prawle Point to 38° at Stornoway and Nairn.

Wind strong North-Easterly over Scandinavia and the greater part of our Islands, but light from West in the south-east of England and strong from the same quarter in the south of France. Subsequently shifting to the Eastward in the south-east.

Sea rough off the north and north-east of our Islands and rather rough in the west, but moderate to smooth elsewhere.

Barometer falling in Spain and the west of France, but rising elsewhere. Pressure high in Portugal and also to the northward of our Islands; depression of previous three days disappearing over the south-east of England, but large shallow area of low pressure lying over the Baltic and Germany. New depression appearing later near the mouth of the Channel.

Sunday, April 22.

Weather fine in Scandinavia, but cloudy or overcast elsewhere, with rain in the south of England and also in Spain and the south of France. Showers falling later at several of our northern stations.

Temperature fallen in Sweden and Denmark and risen in France, but changed irregularly elsewhere; readings over our Islands ranging from 49° at Jersey to 38° at Yarmouth and 36° at Nairn.

Wind light to fresh from the Southward in France and variable in Germany, but Easterly or North-Easterly elsewhere.

Sea rough on several parts of our north-west, north, and north-east coasts.

Barometer falling at all but the Scandinavian stations. Pressure highest in Sweden, with a well-marked depression near the mouth of the Channel, and a shallow disturbance over North Germany. Slight rise taking place over our Islands later.

Monday, April 23.

Weather fine in Scandinavia and the extreme north of Scotland, but cloudy or overcast elsewhere, with rain at most of the Channel stations. Heavy rain falling later in the south-east of England.

Temperature risen over the greater part of Germany and France, but changed irregularly elsewhere; readings over our Islands ranging at 8 a.m. from 48° at Jersey to 38° at Aberdeen and Leith.

Wind Southerly or South-Westerly in France and Spain, but Easterly or North-Easterly elsewhere. Strong in force on the more exposed parts of our coasts.

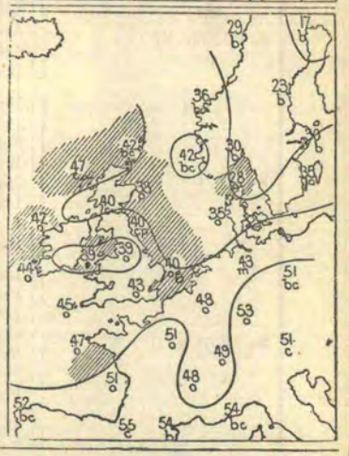
Sea rough on all but our southern coasts.

Barometer rising generally. Pressure highest over the north of Sweden, with a trough of low readings over the Channel and north of France, and a small depression off the north-west of Spain. Subsequent changes somewhat irregular, but rise continuing in most places.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 61 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	45	33	43·4	37·0	40·1	− 3·4	4	18	5	0·40	−0·08	*	*
	Stornoway	52	34	47·4	40·0	43·5	− 1·3	19	6	5	0·59	+0·01	28	27
	Wick	53	32	46·9	38·3	42·4	− 1·8	18	10	6	0·68	+0·33	*	*
	Lairg	58	26	47·6	32·6	39·7	− 3·8	16	34	7	0·57	+0·07	*	*
	Glencarron	56	27	48·3	34·4	41·0	− 2·9	18	29	3	0·46†	?	?	?
	Fort Augustus	58	32	48·3	37·3	42·5	− 3·3	23	13	5	0·30†	?	*	*
1. SCOTLAND, E.	Nairn	56	30	48·7	37·4	42·9	− 2·4	26	13	5	0·22	−0·08	*	*
	Aberdeen	56	34	47·1	38·1	42·4	− 2·4	19	11	6	0·69	+0·18	22	22
	Braemar	53	27	44·3	33·6	38·7	− 3·6	6	29	6	0·61	+0·03	15‡	15‡
	Ochtertyre	57	31	50·3	35·6	42·6	− 2·6	31	18	7	1·17	+0·64	*	*
	Leith	57	35	47·3	39·1	43·0	− 3·7	19	8	7	0·66	+0·27	*	*
	Marchmont	56	32	46·4	37·6	41·8	− 3·0	12	17	7	1·38	+0·80	9	9
2. ENGLAND, N.E.	Alnwick Castle	56	34	45·4	37·3	41·2	− 4·5	10	18	7	1·59	+1·04	*	*
	Durham	57	34	47·8	37·7	42·5	− 3·2	22	12	7	1·69	+1·18	10	10
	Shields	56	36	46·9	39·6	43·1	− 2·9	18	7	7	0·66	+0·22	*	*
	Scarborough	58	35	47·0	39·8	43·2	− 3·3	18	6	7	0·95	+0·50	7‡	7‡
	York	60	35	48·9	40·6	44·6	− 3·1	24	4	5	0·98	+0·56	9	9
	Spurn Head	54	38	47·3	41·0	44·0	− 3·0	18	3	6	0·79	?	*	*
3. ENGLAND, E.	Hillington	59	33	51·8	40·2	45·7	− 2·9	33	5	5	0·87	+0·45	13	13
	Yarmouth	54	36	46·4	39·9	43·0	− 5·8	16	6	5	0·27	−0·14	*	*
	Geldeston	58	35	51·1	39·5	45·0	− 3·6	32	7	5	0·26	−0·10	19	19
	Cambridge	62	35	54·9	40·1	47·1	− 2·5	44	5	6	1·18	+0·78	18	18
	Rothamsted	58	35	51·9	40·7	46·0	− 2·3	33	4	7	1·38	+0·87	*	*
	Ingatestone	57	37	52·0	40·4	45·9	− 4·5	34	4	6	1·59	+1·21	7‡	7‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	61	37	50·6	39·9	45·0	− 3·5	30	6	7	0·65	+0·24	10‡	10‡
	Loughborough	58	38	50·9	41·7	46·1	− 2·2	30	1	6	1·31	+0·89	*	*
	Leicester													
	Cheadle	55	36	49·3	39·7	44·3	− 2·3	26	6	4	0·75	+0·24	*	*
	Churchstoke	59	36	50·0	38·9	44·2	− 4·2	28	9	5	1·05	+0·65	17	17
	Hereford	60	38	52·7	40·9	46·5	− 2·6	36	3	7	0·55	+0·13	*	*
	Cirencester	55	38	49·4	40·3	44·6	− 3·5	25	5	7	0·93	+0·41	16	16
	Oxford	56	39	50·6	41·3	45·7	− 3·5	29	2	7	0·84	+0·43	16	16
5. ENGLAND, S.	London	59	40	51·6	42·1	46·6	− 3·5	32	0	6	1·48	+1·06	15‡	15‡
	Strathfield Turgiss	57	34	51·3	41·1	46·0	− 2·4	32	3	6	1·12	+0·69	*	*
	Dungeness	50	40	48·3	41·9	45·0	− 4·8	21	0	5	0·51	+0·09	*	*
	Hastings (St. Leonard's)	50	38	47·9	41·8	44·7	− 4·9	20	1	7	0·63	+0·15	22	22
	Southampton	57	39	50·6	41·9	46·0	− 3·5	28	0	6	1·62	+1·14	15	15
	Hurst Castle	50	43	48·7	43·7	46·1	− 3·5	29	0	6	0·43	+0·01	*	*
	Stowell	55	39	48·7	40·6	44·5	− 4·4	23	4	7	1·35	?	12‡	12‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	54	31	49·7	38·5	43·8	− 2·5	27	10	3	0·44†	−0·42	*	*
	Glasgow	56	33	49·0	38·7	43·6	− 2·5	25	9	5	0·67	+0·15	12	12
	Ardrossan	55	33	49·3	39·1	44·0	− 2·2	26	8	3	0·21	−0·30	*	*
	Glenlee	53	31	47·3	38·3	42·6	− 3·1	20	10	3	0·26	?	*	*
	Douglas (Isle of Man)	52	37	48·8	40·2	44·3	− 3·2	24	5	4	0·59	+0·07	26	26
7. ENGLAND, N.W.	Newton Reigny (Penrith)	55	34	47·9	38·6	43·2	− 2·8	23	10	4	0·63	+0·21	15	15
	Barrow-in-Furness	53	35	51·1	40·9	45·8	− 2·7	31	3	3	0·16	−0·29	*	*
	Stonyhurst	55	36	48·7	40·1	44·2	− 3·0	23	5	5	0·64	+0·08	14	14
	Blackpool	55	33	50·1	40·3	45·0	− 3·8	28	5	5	0·16	−0·24	21	21
	Manchester	57	35	48·6	40·2	44·2	− 2·8	23	5	4	0·39	−0·09	*	*
	Liverpool Obsy (Bidston)	57	35	49·6	41·6	45·4	− 2·8	25	1	6	0·44	+0·07	*	*
	Llandudno	52	37	47·9	41·7	44·7	− 4·7	20	1	5	0·22	−0·17	18	18
	Holyhead	51	38	48·0	41·4	44·5	− 4·8	20	2	5	0·45	+0·04	*	*
8. ENGLAND, S.W.	Llandovery	55	37	51·7	39·9	45·5	− 3·9	33	6	6	0·68	+0·04	*	*
	Pembroke	50	37	47·9	41·3	44·4	− 5·1	20	2	6	0·81	+0·33	34	35
	Arlington (N. Devon)	54	37	49·0	40·1	44·3	− 4·1	24	5	6	0·52	−0·18	*	*
	Cullompton	58	39	51·4	41·6	46·3	− 3·1	32	1	7	1·04	+0·43	24	24
	Falmouth	54	39	50·4	43·9	47·0	− 2·6	35	0	7	0·78	+0·06	33	34
	Plymouth	55	40	52·1	43·0	47·4	− 2·9	38	0	5	0·44	−0·15	22	23
	Prawle Point	51	35	49·3	39·1	44·0	− 5·2	26	8	7	0·94	?	*	*
9. IRELAND, N.	Malin Head	52	36	47·1	40·3	43·5	− 3·4	18	5	5	0·34	?	*	*
	Londonderry	56	33	50·1	38·8	44·2	− 3·4	29	9	5	0·75	+0·23	*	*
	Mullaghmore	53	37	48·9	41·1	44·8	− 3·5	23	3	3	0·29	−0·18	*	*
	Belmullet	51	37	47·6	41·4	44·4	− 4·1	19	2	4	0·65	?	*	*
	Markree Castle	57	35	50·5	38·2	44·1	− 4·0	31	11	3	0·46	−0·10	24	24
	Brookeborough												*	*
	Armagh	58	34	49·8	38·7	44·0	− 3·7	28	9	6	0·72	+0·21	13	13
	Donaghadee	53	38	48·4	40·7	44·4	− 3·6	22	4	3	0·29	−0·19	*	*
	Edgeworthstown	55	35	49·6	37·6	43·3	− 5·2	28	12	3	0·94	+0·41	*	*
10. IRELAND, S.	Dublin	58	40	50·3	42·3	46·1	− 2·7	29	0	5	0·67	+0·19	16	16
	Parsonstown	54	36	50·0	39·7	44·6	− 4·0	28	6	5	0·76	+0·26	20	20
	Kilkenny	56	38	50·7	40·9	45·6	− 2·8	30	3	4	0·71	+0·19	*	*
	Waterford	57	39	51·2	41·1	45·9	− 3·3	31	3	3	0·48	−0·18	*	*
	Roche's Point	55	40	51·3	42·7	46·8	− 2·5	34	0	3	0·23	−0·55	*	*
	Valencia	54	40	50·9	43·1	46·8	− 2·9	34	0	5	0·57	−0·33	27	28
	Killarney	54	39	49·4	42·2	45·6	− 3·5	25	0	4	0·42	?	*	*
	Foynes	52	42	49·5	44·1	46·7	− 1·6	33	0	2	0·21	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	55	42	50·1	44·1	47·0	− 3·2	35	0	6	0·43	−0·15	*	*
	Jersey (Noirmont)	56	40	52·7	44·1	48·2	− 1·6	43	0	7	1·73	+1·26	30	31

Stations marked Ⓜ are in connection with the Royal Meteorological Society, and those marked Ⓢ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

NOTE.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 17.] *Second Series.* WEEK ENDING MONDAY, 30TH APRIL, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 68.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	55	25	49·0	36·2	42·3	3 below.	26	− 2	16	+ 6	116	− 67	667	+190
	1. SCOTLAND, EAST	61	26	51·7	37·0	44·0	2 below.	35	− 2	14	+ 5	154	−104	662	+142
	2. ENGLAND, N.E.	60	34	50·8	33·5	44·3	3 below.	31	− 7	10	+ 2	149	−114	545	+ 81
	3. ENGLAND, EAST	66	28	52·0	38·0	44·7	5 below.	36	−13	11	+ 2	185	−163	641	+153
	4. MIDLAND COUNTIES	66	28	52·3	38·5	45·1	4 below.	36	−16	10	0	197	−181	637	+155
	5. ENGLAND, SOUTH	65	30	53·1	39·6	46·1	4 below.	39	−16	7	+ 2	191	−213	572	+208
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	55	27	50·6	38·8	44·5	3 below.	31	−11	9	+ 2	174	−121	494	+111
	7. ENGLAND, N.W.	60	27	49·8	39·1	44·2	5 below.	28	−16	8	+ 2	147	−156	496	+123
	8. ENGLAND, S.W.	61	29	51·8	40·1	45·7	5 below.	34	−16	5	+ 2	210	−227	485	+257
	9. IRELAND NORTH	59	28	50·9	39·6	45·0	4 below.	31	−13	7	+ 1	224	−138	407	+ 70
	10. IRELAND, SOUTH	58	29	51·9	41·6	46·5	3 below.	33	−17	1	− 3	301	−176	352	+120
	— CHANNEL ISLANDS	60	35	52·3	42·5	47·2	4 below.	36	−17	0	0	287	−209	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 68.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	5	10	3 more.	83	+ 7	13·1	−1·3	37	35	312	− 20	25	− 2
	1. SCOTLAND, EAST	4	2	3 less.	73	+13	8·7	−0·4	41	39	316	− 64	25	− 5
	2. ENGLAND, N.E.	4	2	3 less.	68	+ 9	7·6	−0·1	12	12	279	− 23	22	− 2
	3. ENGLAND, EAST	2	1	3 less.	67	+ 6	6·7	−0·6	23	23	288	−111	22	− 9
	4. MIDLAND COUNTIES	2	1	3 less.	59	+ 1	6·1	−2·3	18	18	260	− 92	20	− 7
	5. ENGLAND, SOUTH	1	less than ½	½ less.	60	+ 3	7·3	−1·4	29	29	262	−108	20	− 9
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	5	10	1 more.	58	−10	11·5	−3·0	33	32	358	+ 28	28	+ 2
	7. ENGLAND, N.W.	4	5	1 more.	67	+ 5	6·6	−3·6	24	23	311	− 10	24	− 1
	8. ENGLAND, S.W.	2	3	3 less.	64	− 2	9·0	−5·0	30	30	373	− 38	29	− 3
	9. IRELAND, NORTH	5	5	0 (average).	65	− 9	9·1	−1·9	25	24	284	− 73	22	− 6
	10. IRELAND, SOUTH	4	9	3 more.	57	−14	9·8	−3·6	25	25	368	− 32	28	− 3
	— CHANNEL ISLANDS	1	1	4 less.	78	+ 5	9·3	−1·6	43	43	381	−116	29	− 9

General Remarks.

Weather has been cloudy or dull generally, but some bright intervals were experienced over England as the week drew towards its close.

Temperature, as a whole, has continued considerably below the normal value, but during the latter part of the time it was rather above the mean for the season. On the earlier days of the period the maxima were generally as low as from 42° to 48°, but subsequently they were much higher, and readings of 65° or 66° were recorded in many parts of England. The lowest of the minima, which were registered either on the 26th or 27th, varied from 25° in "Scotland, N." to 34° in "England, N.E." and 35° in the "Channel Islands".

Rainfall has been rather more than the mean in the north and west of Scotland, as well as in the north-west of England and south of Ireland, but in nearly all other districts it has been less. Over the greater part of England the fall was extremely slight.

Bright sunshine shows an increase on that recorded last week, but has still been deficient very generally. The percentage of the possible amount of duration ranged from 12 in "England, N.E." and 18 in the "Midland Counties", to 39 in "Scotland, E." and 43 in the "Channel Islands".

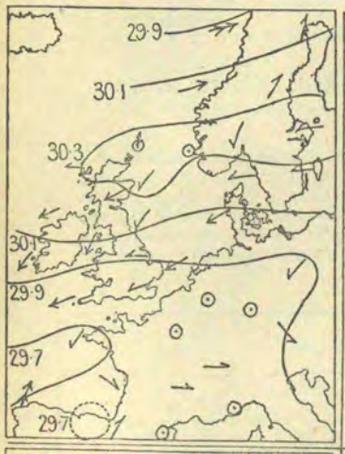
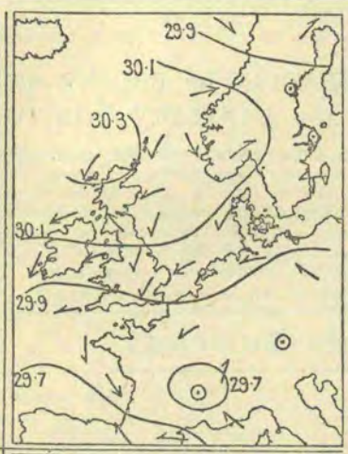
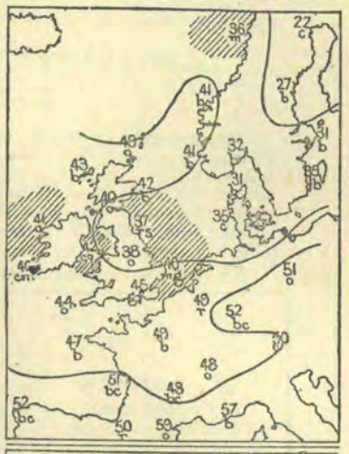
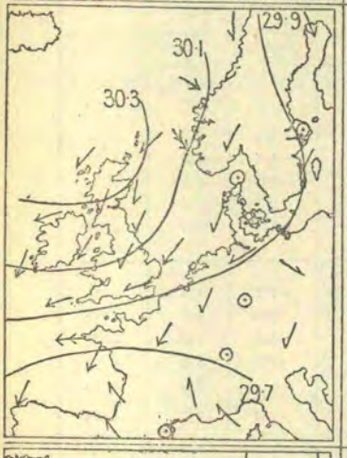
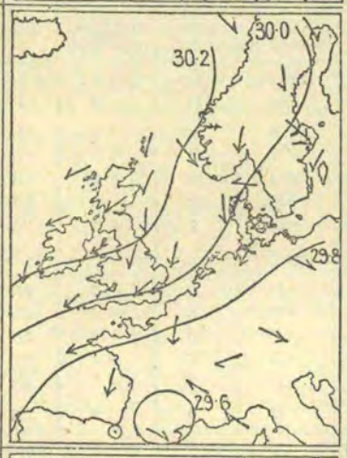
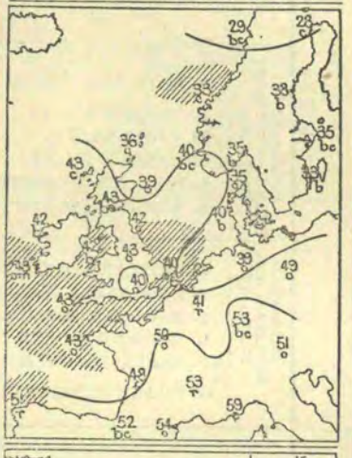
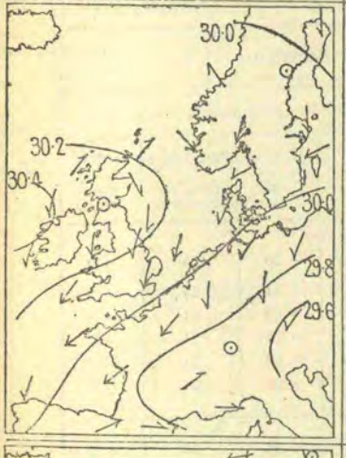
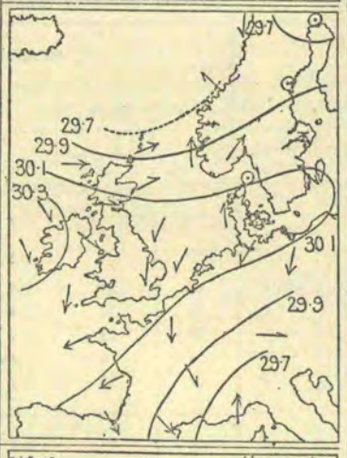
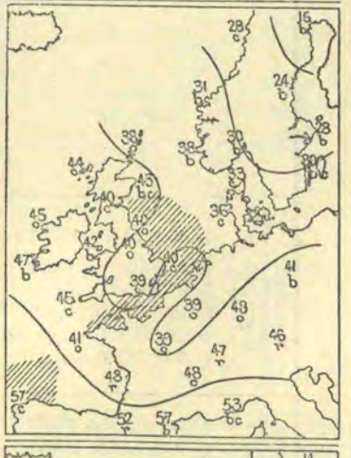
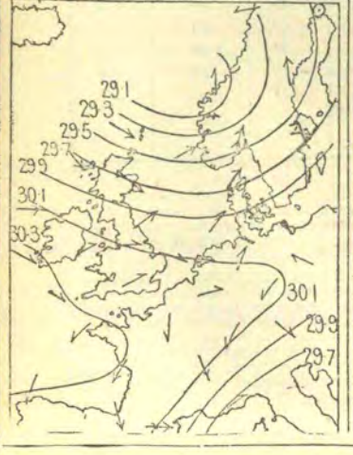
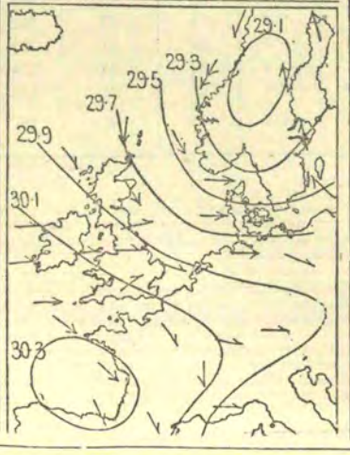
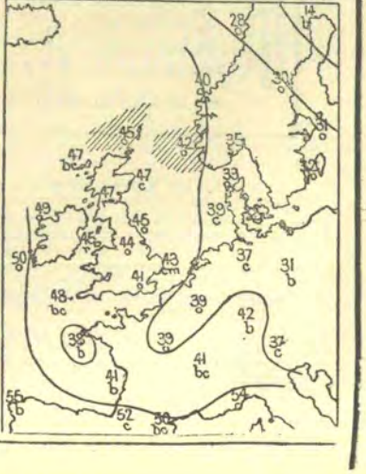
Depressions observed.—During the earlier part of the week the barometer continued highest in the north, while depressions were shown to the southward and south-eastward of our Islands. As the week progressed, however, the highest pressure was transferred to the southern and south-eastern parts of our area, and depressions appeared on our western and northern coasts from the Atlantic. Fresh to strong North-Easterly winds continued prevalent over the United Kingdom until the 27th, when Westerly winds set in on all our coasts and blew strongly at our more northern stations. Towards the end of the period the wind backed to the South-Westward or Southward very generally, and increased to the force of a gale in the south-west and west.

A 54140. 350.—5/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

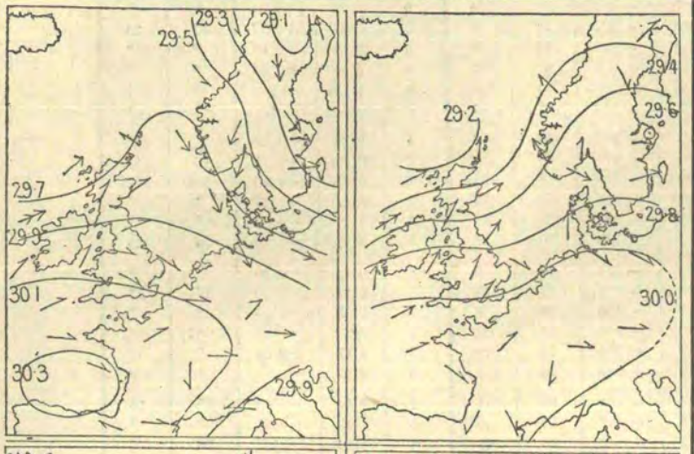
8 a.m.	6 p.m.	Weather	Synoptic Charts. TEMPERATURE AND WEATHER at 8 a.m.
		**Tuesday, April 24.** *Weather* fine in Scandinavia, Denmark, the north of Scotland, and the greater part of France, but dull elsewhere, with rain over eastern and central England. *Temperature* risen in most places; readings over our Islands ranging at 8 a.m. from 47° at Jersey to 37° at Shields. Maxima below 50° in most parts of the Kingdom. *Wind* South-Westerly in the north of Scandinavia and variable in Germany and the south of France, but Easterly or North-Easterly elsewhere; strong in force in many parts of our Islands. *Sea* rough off the east of England as well as at some of the more exposed western stations. *Barometer* falling briskly in the north of Scandinavia. Narrow anticyclonic band extending from the Baltic to the north of Scotland, with a large depression off the north of Norway, and an irregularly formed area of low pressure over the Bay of Biscay. Fall taking place later at all but the English and Irish stations.	
		**Wednesday, April 25.** *Weather* fine in Scandinavia, the north-west of our Islands, and the greater part of Denmark and Germany, but dull elsewhere. Improvement taking place at our eastern and southern stations later. *Temperature* fallen a little on our southern and extreme northern coasts, but risen elsewhere; readings over our Islands ranging at 8 a.m. from 45° at Roche's Point to 36° in the Shetlands. *Wind* Northerly in Scotland and Scandinavia, but North-Easterly in most other parts of Western Europe; strong in force in many places, with a moderate gale in the Channel. *Sea* rough on our east, south, and south-west coasts. *Barometer* rising in our Islands, but falling at most of the Continental stations. Anticyclone lying over Scotland, with a large area of low pressure over Spain and the south of France, and another low pressure area over the Gulf of Bothnia. Rise taking place later on the eastern shores of the North Sea.	
		**Thursday, April 26.** *Weather* rainy in some parts of France and also in south Germany, but fair in most other localities. Subsequently becoming dull and unsettled in the north of our Islands. *Temperature* risen a little in the west and north, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 47° at Valencia to 37° at Oxford. Sharp ground frost occurring over England at night. *Wind* South-Westerly in the north of our Islands, but North-Easterly elsewhere; strong in force over the south of England and the north of France. *Sea* rough in the east and south-east, but moderate or slight elsewhere. *Barometer* rising at all but our extreme northern stations. Anticyclone lying off the west of Ireland, and lowest readings found in a depression lying over South Germany. Large disturbances subsequently appearing off our northern coasts, and barometer falling briskly in Scotland and Scandinavia.	
		**Friday, April 27.** *Weather* fine and bright in Germany, France, and the south of England, but changeable and unsettled elsewhere, with rain in many places. *Temperature* risen at all but the German and southern French stations; readings over our Islands ranging at 8 a.m. from 50° at Valencia to 40° at Spurn Head. Brisk rise taking place over England later. *Wind* Westerly in our Islands and South-Westerly in Denmark, but Southerly in Scandinavia; strong to a gale in force on our extreme northern coasts. Moderate North-Easterly in France. Subsequently veering to the Northward in the north of Scotland. *Sea* rather rough off the north of Scotland, but moderate to smooth elsewhere. *Barometer* falling at all but the French and German stations. Anticyclone lying off our extreme south-west coasts, and large depression off the west of Norway. Depression subsequently moving eastwards, and barometer rising again on our northern coasts.	

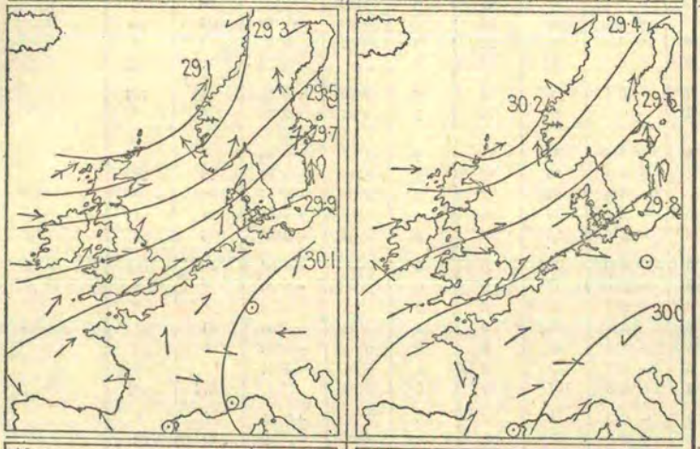
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

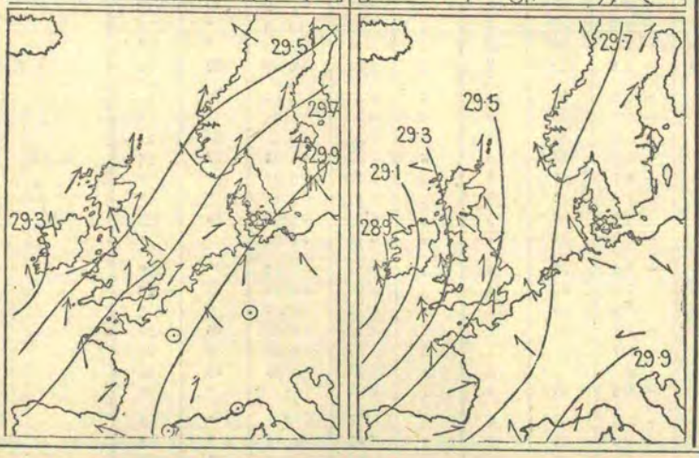
Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**







Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, April 28.

Weather fine over Spain and the south of France and fair on the eastern shores of the North Sea, but cloudy elsewhere, with rain in the north-west of our Islands. Showers falling later at several of our western stations.

Temperature fallen on all but our northern coasts; readings over our Islands ranging at 8 a.m. from 53° at Cambridge to 38° at Sumburgh Head. Subsequently rising above 60° at some of the English stations.

Wind strong from North-West or North in Scandinavia and Denmark, but Westerly or South-Westerly over the greater part of our Islands and France. Subsequently increasing to moderate gale from South-West on our northern coasts.

Sea rather rough in the extreme north, but moderate to smooth elsewhere.

Barometer rising a little over the North Sea and adjacent coasts, but falling elsewhere. Anticyclone lying over the Bay of Biscay. Depression of previous day moving away north-eastwards, but new disturbance skirting the north of Scotland. Brisk fall taking place in north later.

Sunday, April 29.

Weather fair in the north and east of our Islands and fine in Germany and France, but cloudy elsewhere, with rain at some of our western stations. Showers falling in the north later.

Temperature fallen a little in our Islands, but risen at most of the Continental stations; readings over the United Kingdom ranging at 8 a.m. from 50° at Wick to 44° at Parsonstown and 41° at Stornoway.

Wind strong South-Westerly in our Islands and Southerly in Scandinavia, but light and variable over the southern parts of Germany and France.

Sea rough off the north of Scotland, and also at some of our south-western stations.

Barometer falling generally. Pressure highest over Germany and the south-east of France, with a large area of low readings to the northward of our Islands. Low pressure system subsequently moving north-eastwards, and barometer rising in north.

Monday, April 30.

Weather fine at our northern, eastern, and south-eastern stations, but cloudy elsewhere, with rain on our west coast. Rain extending later to our more northern districts.

Temperature risen generally; readings over our Islands ranging at 8 a.m. from 53° in London to 44° at Stornoway and Barrow-in-Furness.

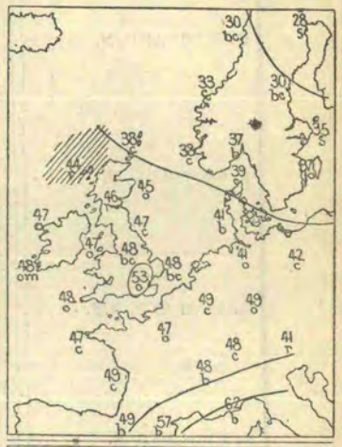
Wind South-Easterly at some of our western stations, but Southerly or South-Westerly elsewhere, light or fresh in force generally. Subsequently increasing to gale from South on our south-west coasts.

Sea rough in the south-west.

Barometer falling at all but the extreme northern stations. Pressure highest in the south-east of France, with a depression off the west of Ireland. Disturbance subsequently growing deeper, and barometer falling generally.

Synoptic Charts.

TEMPERATURE AND WEATHER at 8 a.m.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇛ = a heavy gale; ➤ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°	°	Inches.	Inches.		
Week ending April 23	Brookeborough	55	34	49·8	37·9	43·6	− 4·2	28	11	4	0·82	?	*	*

III.—DATA from which the SUMMARY on page 65 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ⚓	50	32	45·1	35·4	40·0	− 4·3	9	24	5	0·76	+0·31	*	*
	Stornoway	51	35	48·7	39·0	43·6	− 1·9	24	8	6	1·35	+0·77	37	35
	Wick	55	28	51·3	36·3	43·4	− 1·6	34	16	6	0·43	+0·08	*	*
	Lairg ⚓	55	27	50·0	34·0	41·6	− 2·7	22	31	4	0·59	+0·09	*	*
	Glencarron ⚓	55	28	48·4	?35·7	?41·8	?− 2·9	?18	?25	5	1·93†	?	?	?
	Fort Augustus ⚓	54	25	50·3	36·9	43·4	− 3·3	31	14	6	0·66†	?	*	*
1. SCOTLAND, E.	Nairn	56	28	51·6	37·3	44·1	− 1·9	34	13	4	0·19	−0·14	*	*
	Aberdeen	58	35	51·7	39·0	45·1	− 0·7	34	8	2	0·05	−0·45	46	44
	Braemar ⚓	52	26	48·6	34·8	41·4	− 1·5	18	28	1	0·09	−0·46	53‡	50‡
	Ochtertyre ⚓	60	26	55·4	37·0	45·8	0·0	48	14	4	0·27	−0·27	*	*
	Leith	61	32	52·6	37·9	44·9	− 2·7	38	11	5	0·08	−0·30	*	*
	Marchmont ⚓	55	30	50·0	36·1	42·7	− 3·0	30	17	5	0·37	−0·19	24	23
2. ENGLAND, N.E.	Alnwick Castle	55	35	49·4	39·7	44·3	− 2·2	26	6	5	0·13	−0·39	*	*
	Durham	59	34	50·8	37·4	43·8	− 2·9	32	13	4	0·11	−0·40	17	17
	Shields	60	35	51·0	39·0	44·7	− 2·3	32	8	4	0·09	−0·33	*	*
	Scarborough ⚓	59	35	51·3	37·4	44·0	− 3·4	33	13	4	0·20	−0·24	8‡	8‡
	York	60	35	52·3	38·4	45·0	− 3·6	36	10	3	0·17	−0·25	7	7
	Spurn Head	59	35	50·0	38·9	44·2	− 3·6	28	9	3	0·21	?	*	*
3. ENGLAND, E.	Hillington ⚓	56	30	52·3	38·0	44·8	− 4·9	36	11	1	0·10	−0·32	25	25
	Yarmouth	57	33	48·3	38·7	43·3	− 6·7	23	9	4	0·16	−0·25	*	*
	Geldeston	63	30	51·3	37·9	44·3	− 5·2	33	11	2	0·10	−0·27	26	26
	Cambridge	65	28	54·1	38·0	45·7	− 5·0	43	11	2	0·12	−0·28	23	23
	Rothamsted	61	28	52·6	37·7	44·8	− 4·3	38	12	3	0·05	−0·44	*	*
	Ingatestone	65	30	53·4	37·9	45·2	− 6·3	40	11	0	—	−0·38	18‡	18‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	64	33	53·7	40·3	46·7	− 3·1	40	5	2	0·20	−0·21	14‡	14‡
	Loughborough	64	31	52·3	38·6	45·1	− 4·5	36	10	1	0·05	−0·38	*	*
	Leicester													
	Cheadle ⚓	62	34	50·4	38·0	43·9	− 3·8	30	11	2	0·17	−0·35	*	*
	Churchstoke ⚓	62	31	51·8	37·8	44·5	− 4·8	35	12	3	0·18	−0·22	12	12
	Hereford ⚓	66	31	54·4	39·6	46·6	− 3·4	42	7	2	0·07	−0·35	*	*
	Cirencester	57	28	51·3	36·4	43·5	− 5·6	34	16	1	0·01	−0·51	21	21
	Oxford	60	32	52·3	39·0	45·3	− 4·8	36	8	2	0·04	−0·38	23	23
5. ENGLAND, S.	London	65	30	54·3	39·0	46·3	− 4·6	43	8	0	—	−0·42	20‡	20‡
	Strathfield Turgiss ⚓	62	30	55·4	38·9	46·8	− 2·6	47	9	0	—	−0·40	*	*
	Dungeness	56	33	49·9	39·7	44·6	− 6·1	28	6	2	0·03	−0·38	*	*
	Hastings (St. Leonard's)	56	33	51·5	39·9	45·4	− 4·9	33	6	1	0·02	−0·43	31	31
	Southampton	60	32	55·7	40·0	47·5	− 2·8	47	6	1	0·04	−0·43	38	38
	Hurst Castle	55	35	52·7	41·0	46·6	− 4·0	36	3	1	0·01	−0·41	*	*
	Stowell ⚓	57	30	?52·5	38·7	?45·3	?− 4·6	?37	?9	2	0·06	?	26‡	26‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	53	30	50·9	39·4	44·9	− 2·2	31	2	5	1·77†	+0·91	*	*
	Glasgow	55	35	51·2	38·7	44·7	− 2·0	33	9	4	0·42	−0·10	29	28
	Ardrossan	51	34	49·6	39·4	44·3	− 2·5	27	7	4	0·47	−0·04	*	*
	Glenlee ⚓	55	27	51·1	37·2	43·8	− 2·4	33	13	5	1·05	?	*	*
	Douglas (Isle of Man)	54	36	50·3	39·5	44·6	− 3·3	29	7	5	1·02	+0·50	37	36
7. ENGLAND, N.W.	Newton Reigny (Penrith)	57	27	50·5	36·3	43·1	− 3·8	32	16	3	0·42	0·00	29	28
	Barrow-in-Furness	53	33	49·9	39·0	44·2	− 5·1	28	8	4	0·50	+0·06	*	*
	Stonyhurst	55	34	49·1	38·3	43·4	− 5·0	25	10	5	0·50	−0·06	22	21
	Blackpool ⚓	54	33	49·2	38·7	43·7	− 5·9	26	9	5	0·43	+0·03	22	21
	Manchester	59	34	50·4	39·0	44·4	− 4·1	29	8	3	0·27	−0·21	*	*
	Liverpool Obsr (Bidston)	60	35	51·3	40·0	45·4	− 3·9	32	6	4	0·21	−0·17	*	*
	Llandudno ⚓	56	37	49·1	40·5	44·6	− 5·6	25	4	5	0·78	+0·39	22	22
	Holyhead	53	36	48·7	40·7	44·5	− 5·7	23	4	4	0·73	+0·32	*	*
8. ENGLAND, S.W.	Llandovery	58	29	53·1	40·4	46·5	− 3·9	38	4	4	0·62	−0·02	*	*
	Pembroke	52	35	48·3	40·7	44·3	− 5·8	22	4	4	0·68	+0·20	23	23
	Arlington (N. Devon)	53	31	49·7	37·9	43·5	− 5·8	28	11	2	0·15	−0·55	*	*
	Cullompton ⚓	61	29	53·9	39·4	46·3	− 4·1	41	7	3	0·19	−0·41	25	25
	Falmouth	54	36	51·7	41·7	46·5	− 3·7	33	1	2	0·15	−0·55	34	34
	Plymouth	57	35	55·2	41·4	48·0	− 3·2	45	2	1	0·12	−0·44	36	36
	Prawle Point	58	34	50·4	39·1	44·5	− 5·6	30	8	1	0·01	?	*	*
9. IRELAND, N.	Malin Head	52	38	48·7	40·6	44·5	− 3·3	23	4	4	0·57	?	*	*
	Londonderry	54	32	51·5	39·1	45·0	− 3·5	33	8	5	0·41	−0·12	*	*
	Mullaghmore	54	33	49·7	40·0	44·6	− 4·6	27	6	5	0·69	+0·20	*	*
	Belmullet	50	38	48·6	42·6	45·5	− 3·6	25	0	5	0·43	?	*	*
	Markree Castle	55	28	51·3	37·9	44·3	− 4·9	33	11	5	0·52	−0·02	27	26
	Brookeborough	56	30	51·4	37·9	44·3	− 4·6	33	11	5	0·66	?	*	*
	Armagh	56	33	52·3	39·4	45·5	− 3·0	35	7	4	0·36	−0·15	23	22
	Donaghadee	59	37	51·3	41·1	46·0	− 2·8	32	3	4	0·46	−0·02	*	*
	Edgeworthstown	57	30	53·1	37·9	45·1	− 4·7	39	11	4	0·77	+0·25	*	*
10. IRELAND, S.	Dublin	58	39	51·8	42·7	47·4	− 2·6	35	0	4	0·58	+0·11	22	22
	Parsonstown	56	29	52·7	38·7	45·4	− 4·0	38	9	3	0·47	−0·03	23	23
	Kilkenny	57	33	52·1	40·6	46·1	− 3·5	35	4	3	0·72	+0·22	*	*
	Waterford	56	36	52·6	41·0	46·5	− 3·5	36	3	3	0·78	+0·15	*	*
	Roche's Point	56	37	51·9	42·4	46·9	− 3·2	34	0	3	1·30	+0·55	*	*
	Valencia	53	39	51·4	42·6	46·8	− 3·3	34	0	4	1·57	+0·76	29	29
	Killarney	55	31	51·6	39·7	45·4	− 4·6	33	6	4	1·18	?	*	*
	Foynes	56	39	51·4	44·7	47·9	− 1·4	41	0	4	0·48	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	54	41	50·3	43·6	46·8	− 4·0	34	0	2	0·14	−0·39	*	*
	Jersey (Noirmont)	60	35	54·3	41·3	47·5	− 3·3	41	2	0	—	−0·44	43	43

Stations marked ⚓ are in connection with the Royal Meteorological Society, and those marked ⚓ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 18.] *Second Series.* WEEK ENDING MONDAY, 7TH MAY, 1888. [*Price* 4*d.* [*Annual subscription, post paid,* £1 1*s.* 2*d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 72.)	Observed during the Week. Highest.	Observed during the Week. Lowest.	Averages of Daily Maxima.	Averages of Daily Minima.	Averages of Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	For the Week. Difference from Mean.	For the Week. Below 42°	For the Week. Difference from Mean.	From January 3, 1888. Above 42°.	From January 3, 1888. Difference from Mean.	From January 3, 1888. Below 42°.	From January 3, 1888. Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	62	33	50·7	39·0	44·5	1 below.	30	− 1	8	− 1	146	− 66	675	+188
	1. SCOTLAND, EAST	70	32	54·8	39·7	46·9	1 above.	44	+ 1		− 1	198	−101	668	+140
	2. ENGLAND, N.E.	69	38	56·5	42·2	48·9	1 above.	48	+ 5	0	− 6	197	−105	545	+ 72
	3. ENGLAND, EAST	72	33	58·5	41·1	49·3	2 below.	55	+ 4	3	− 4	240	−165	644	+147
	4. MIDLAND COUNTIES	72	35	57·6	42·1	49·4	1 below.	52	− 6	0	− 8	249	−184	637	+144
	5. ENGLAND, SOUTH	69	33	55·1	42·1	48·2	3 below.	43	−18	0	− 3	234	−226	572	+203
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	60	34	52·2	42·2	46·9	1 below.	34	−12	0	− 6	208	−131	494	+105
	7. ENGLAND, N.W.	66	36	53·4	42·8	47·8	2 below.	41	− 9	0	− 5	188	−158	496	+118
	8. ENGLAND, S.W.	65	33	53·6	42·3	47·7	3 below.	40	−16	0	− 2	250	−234	485	+254
	9. IRELAND NORTH	66	30	54·2	41·8	47·7	2 below.	41	− 7	1	− 4	265	−144	408	+ 65
	10. IRELAND, SOUTH	69	32	55·5	42·7	48·7	2 below.	47	− 9	0	− 3	348	−181	352	+117
	— CHANNEL ISLANDS	60	42	54·1	44·9	49·2	2 below.	50	−10	0	0	337	−213	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 72.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	Rainfall. From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	Bright Sunshine. From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	7	15	4 more.	90	+10	14·6	−0·9	30	28	342	− 29	25	− 2
	1. SCOTLAND, EAST	5	5	0 (average).	78	+14	9·2	−0·4	36	33	352	− 59	26	− 4
	2. ENGLAND, N.E.	2	1	4 less.	70	+ 7	7·7	−0·5	40	38	319	− 22	23	− 2
	3. ENGLAND, EAST	3	2	2 less.	70	+ 5	6·9	−0·8	36	34	324	−114	23	− 8
	4. MIDLAND COUNTIES	3	4	1 less.	62	+ 1	6·5	−2·3	40	38	300	− 90	21	− 7
	5. ENGLAND, SOUTH	3	3	1 less.	63	+ 3	7·6	−1·5	38	36	300	−124	21	− 9
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	6	15	3 more.	64	− 8	13·0	−2·5	29	27	387	+ 14	28	+ 1
	7. ENGLAND, N.W.	4	5	1 more.	71	+ 6	7·1	−3·5	27	26	338	− 28	24	− 3
	8. ENGLAND, S.W.	4	6	0 (average).	68	− 1	9·6	−5·0	38	37	411	− 45	29	− 4
	9. IRELAND, NORTH	6	7	2 more.	71	− 7	9·8	−1·7	33	31	317	− 79	23	− 5
	10. IRELAND, SOUTH	4	8	2 more.	61	−13	10·6	−3·4	43	41	411	− 38	29	− 4
	— CHANNEL ISLANDS	4	3	1 less.	82	+ 6	9·6	−1·7	55	54	436	−113	31	− 8

General Remarks.

Weather has been somewhat changeable and unsettled in the western and northern parts of the Kingdom, with frequent falls of rain, but over the greater part of England the conditions have been finer and the rainfall slight. At the close of the period much fog was experienced over the St. George's, Bristol, and English Channels.

Temperature has continued below the mean generally, the deficit ranging from 1° to 8°. In "Scotland, E." and "England, N.E.", however, an excess of 1° is shown. Towards the end of the week the thermometer became high for the season in the eastern parts of Scotland and over eastern and central England, but remained low on our south and south-west coasts. The highest of the maxima, which were recorded on the 7th, ranged from 60° in "Scotland, W." and the "Channel Islands" to 69° in "England, N.E.", "England, S.", and "Ireland, S.", 70° in "Scotland, E.", and 72° in "England, E." and the "Midland Counties". The lowest of the minima were registered at most stations either on the 4th or 5th, when the readings varied from 30° in "Ireland, N." to 38° in "England, N.E." and 42° in the "Channel Islands".

Rainfall has been rather more than the mean over Ireland and the greater part of Scotland, as well as in "England, N.W.", but less over eastern, southern, and central England.

Bright sunshine has been rather less prevalent than it was last week in the Scotch districts, but more so over England and Ireland. The percentage of the possible amount of duration ranged from 26 in "England, N.W." to 38 in "England, N.E.", and the "Midland Counties", 41 in "Ireland, S.", and 54 in the "Channel Islands".

Depressions observed.—During the earlier part of this period, some rather deep depressions travelled eastwards or north-eastwards over our more northern coasts, causing strong winds or gales from between South-West and North-West in nearly all parts of the Kingdom. As the week progressed, however, the depressions became less deep and their centres lay to the northward of our Islands, while a large anticyclone was formed over Germany and France. The winds, therefore, became light or moderate in force excepting in the extreme north, where they occasionally blew with considerable strength.

A 54233. 350.—5/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

Weather

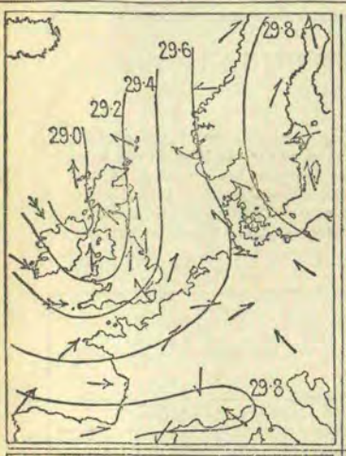
During the 24 hours succeeding

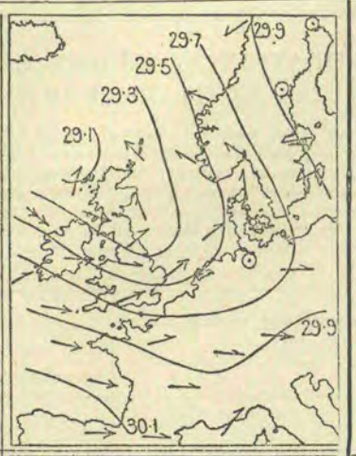
8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, May 1.

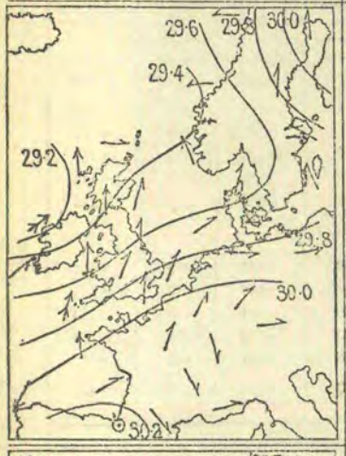
Weather cloudy generally, with rain in many parts of our Islands, as well as in Germany and the south-east of France. Some improvement taking place in west later.

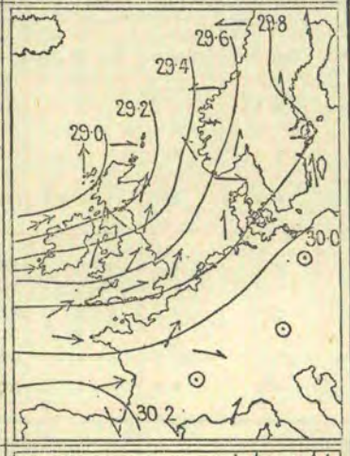
Temperature risen at all but our extreme northern stations; readings over our Islands ranging at 8 a.m. from 55° at Cambridge to 43° in the Shetlands.

Wind strong to a gale from North-West in Ireland and from West or South-West in the south of England, but fresh from South on our east coasts, and moderate from South-East on the eastern shores of the North Sea.

Sea rough on our south-west coasts generally, and rather rough at Wick.

Barometer falling in our Islands as well as in Denmark, Germany, and the Netherlands, but rising elsewhere. Pressure high both in Sweden and Spain, but well-defined "V-shaped" depression lying over our extreme north-west coasts. Depression subsequently moving north-eastwards, and barometer rising again in west and south.





Wednesday, May 2.

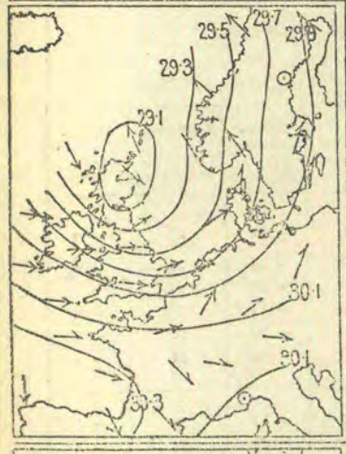
Weather dull and rainy in many parts of our west and north-west coasts, but fair in most other localities. Rain extending later to nearly all parts of North-Western Europe.

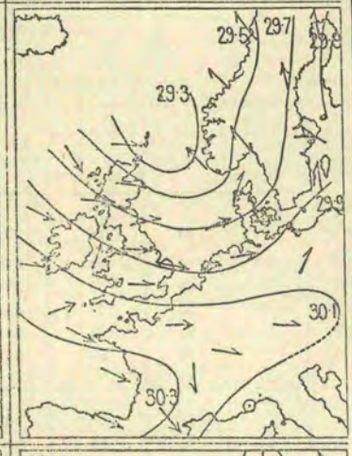
Temperature fallen in most places; readings over our Islands ranging at 8 a.m. from 51° in London to 43° at Stornoway and Nairn.

Wind Southerly or South-Westerly in our Islands and France; strong to a gale on our western coasts. Moderate South-Easterly or Easterly in Scandinavia. Moderate Southerly gales blowing in north and east later.

Sea high at Valencia, and rough on all our west and south-west coasts.

Barometer falling in the west of our Islands and also in Scandinavia, but rising elsewhere. Pressure now highest in Spain, but relatively high over the Gulf of Bothnia, with a new depression off our extreme north-west coasts. Fall taking place later in all parts of the United Kingdom.





Thursday, May 3.

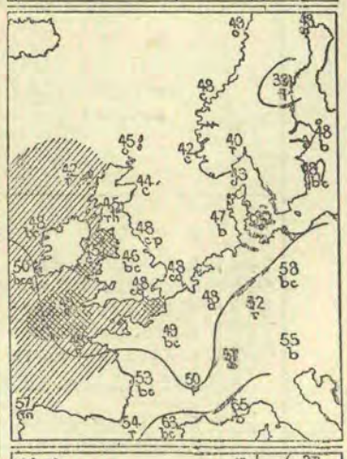
Weather squally and showery in nearly all parts of Western Europe, with hail at some of our north-western stations, and a little snow at Lutterworth.

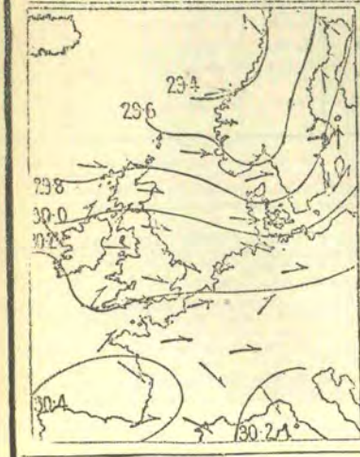
Temperature changed irregularly, but fallen a little in most places; readings over our Islands ranging at 8 a.m. from 50° at Leith and Valencia to 42° at Stornoway.

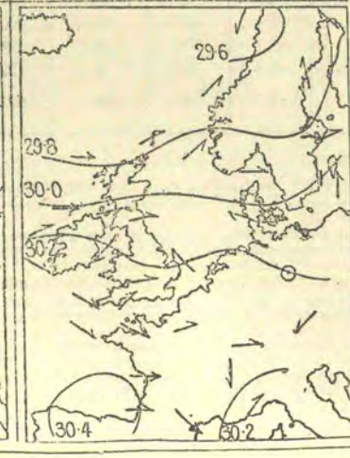
Wind strong to a gale from the Westward over England, Ireland, and the north of France, but Southerly on the eastern shores of the North Sea. Gale severe over the Irish Sea. Subsequently increasing to fresh gale from North-West in the north and east of Scotland.

Sea high in the Irish Sea and St. George's Channel, and rough on all our western and southern coasts.

Barometer rising in Spain, France, and the west and south of our Islands, but falling elsewhere. Anticyclone appearing off the north-west of Spain, and depression of previous day now lying over the north and east of Scotland. Depression subsequently travelling north-eastwards and gradually filling up.







Friday, May 4.

Weather showery in the north of Scotland, and rainy in the extreme south of England, but fair or fine elsewhere. Improvement taking place in south later.

Temperature fallen a little in most places; readings over our Islands ranging at 8 a.m. from 51° at Valencia to 41° at Stornoway and Wick.

Wind chiefly Westerly (North-West to South-West) and light or moderate in force, but Southerly or South-Easterly in Sweden and the north of Norway. Subsequently increasing to strong breeze from West in the north of Scotland.

Sea moderate to smooth.

Barometer rising generally. Anticyclone lying over the southern parts of the Bay of Biscay and the north of Spain, and depression of previous two days filling up off the north-west of Norway. Small shallow disturbance passing south-eastwards across the south-west of England during morning, but dispersing later.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

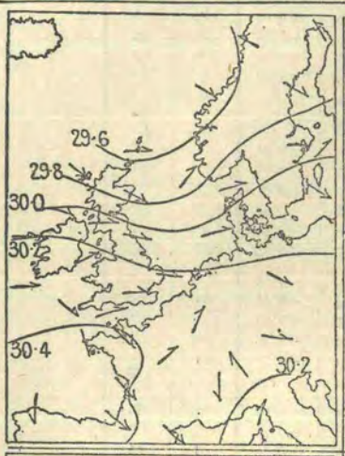
Weather

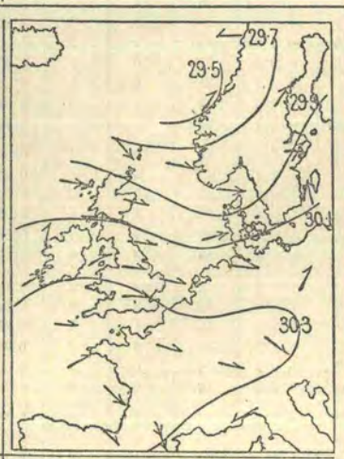
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Saturday, May 5.

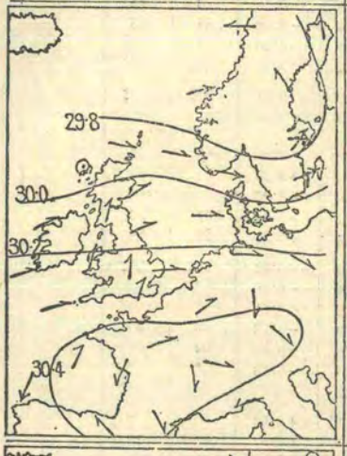
Weather fair generally, but showery at some of our northern stations. Solar halos observed in many parts of England. Rain falling later in the south of Ireland.

Temperature changed little and irregularly; readings over our Islands ranging at 8 a.m. from 51° at Valencia and 50° at Scilly to 38° in the Shetlands.

Wind Westerly in our Islands, but South-Westerly on the eastern shores of the North Sea and North-Westerly in the west and south of France; strong in force in the extreme north but light and moderate elsewhere. Subsequently backing to South-West on our western coasts.

Sea rather rough off the north of Scotland, but moderate to smooth elsewhere.

Barometer rising on all but our extreme northern coasts. Anticyclone lying over the Bay of Biscay and north of France, with a rather deep depression off the north of Scotland. Depression subsequently moving north-eastwards, but small shallow disturbance appearing off the west of Ireland.



Sunday, May 6.

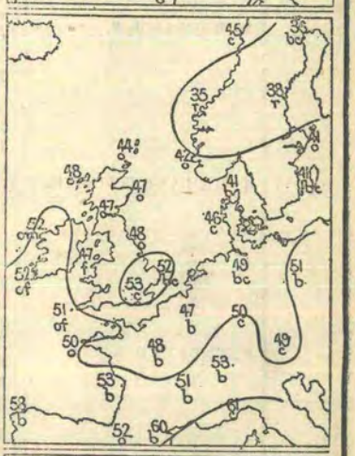
Weather cloudy in our Islands and Scandinavia, with fog on our south-west coasts and rain at Hernösand and Christiansund; fine in France, Germany, and the Netherlands. Showers falling later at some of our western and northern stations.

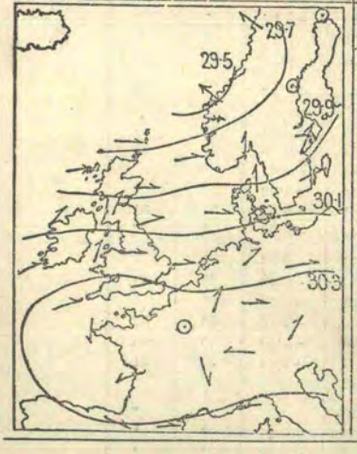
Temperature fallen in the south of Scandinavia, but risen in most other localities; readings over our Islands ranging at 8 a.m. from 53° in London to 44° in the Shetlands.

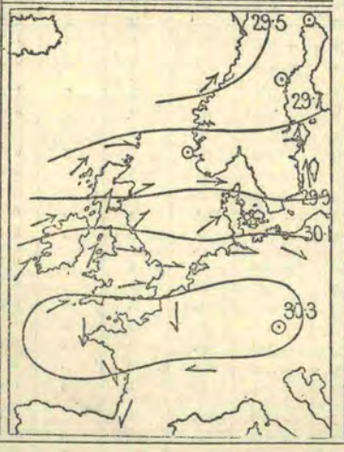
Wind light or moderate from the South-Westward in our Islands but Westerly on the eastern shores of the North Sea and North-Easterly in the south of France.

Sea moderate to smooth.

Barometer rising at all but our western stations. Anticyclone lying over France and South Germany, with a shallow depression over the north of Scandinavia. Slight fall taking place generally later, and new disturbance approaching the north of Scotland.







Monday, May 7.

Weather rainy in Norway, and foggy over the St. George's, Bristol, and English Channels, but fair in most other parts of Western Europe. Showers falling later at several of our north-western stations.

Temperature fallen a little in the south of our Islands, but risen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 62° at Aberdeen to 47° in the Shetlands and 45° at Holyhead and Pembroke. Subsequently rising to 70° or a little more over the eastern parts of Great Britain.

Wind light to fresh from West or South-West over our Islands and the North Sea, but Easterly in the west and south of France.

Sea rather rough off the north of Scotland, but slight or smooth elsewhere.

Barometer falling generally. Large anticyclone lying over France and Germany, with a depression off the west of Norway. New disturbance advancing later to the neighbourhood of the Hebrides, and barometer continuing to fall generally.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 69 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ℳ	51	35	47·6	39·1	43·1	− 1·8	20	8	7	1·02	+0·60	*	*
	Stornoway	55	34	50·6	38·9	44·4	− 1·6	30	9	7	1·28	+0·69	30	28
	Wick	62	34	52·9	38·3	45·2	− 0·5	38	10	7	0·44	+0·09	*	*
	Lairg ℳ	58	33	52·3	38·9	45·2	+ 0·5	35	9	7	0·66	+0·16	*	*
	Glencarron ℳ	55	33	49·2	39·1	43·9	− 1·5	25	8	7	4·04†	?	?	?
	Fort Augustus ℳ	55	35	51·8	39·5	45·3	− 2·1	34	7	7	1·33†	?	*	*
1. SCOTLAND, E.	Nairn	59	34	55·1	38·3	46·2	− 0·5	45	10	7	0·40	+0·04	*	*
	Aberdeen	70	35	56·4	40·3	47·9	+ 1·4	48	5	3	0·24	−0·23	44	41
	Braemar ℳ	59	32	50·2	38·4	44·0	+ 0·5	29	10	6	0·74	+0·21	27‡	25‡
	Ochtertyre ℳ	64	34	56·9	41·0	48·5	+ 2·1	50	3	6	0·95	+0·42	*	*
	Leith	64	37	57·0	41·9	49·0	+ 0·6	49	0	5	0·22	−0·16	*	*
	Marchmont ℳ	59	35	53·4	38·4	45·5	− 0·6	40	10	4	0·17	−0·36	36	33
2. ENGLAND, N.E.	Alnwick Castle	57	38	53·3	43·1	47·9	+ 0·8	41	0	2	0·15	−0·35	*	*
	Durham	66	38	57·7	40·9	48·8	+ 1·2	52	3	2	0·04	−0·45	45	42
	Shields	66	38	56·6	41·7	48·7	+ 1·0	48	1	1	0·01	−0·42	*	*
	Scarborough ℳ	69	38	57·7	42·2	49·5	+ 1·3	53	0	2	0·06	−0·36	35‡	33‡
	York	68	39	58·4	43·1	50·3	+ 0·9	58	0	1	0·09	−0·33	40	38
	Spurn Head	66	40	55·3	41·9	48·2	− 0·2	44	0	3	0·15	?	*	*
3. ENGLAND, E.	Hillington ℳ	71	34	58·0	40·9	48·9	− 1·2	53	3	2	0·14	−0·28	38	36
	Yarmouth	70	40	57·3	42·1	49·2	− 1·8	50	0	3	0·20	−0·21	*	*
	Geldeston	71	38	60·0	41·6	50·3	+ 0·5	60	1	2	0·18	−0·20	46	44
	Cambridge	72	34	60·7	40·6	50·1	− 1·5	63	4	3	0·14	−0·26	40	38
	Rothamsted	69	33	57·3	40·4	48·3	− 1·1	51	4	3	0·23	−0·25	*	*
	Ingatestone	68	33	57·5	40·8	48·7	− 3·6	52	3	2	0·31	−0·08	18‡	17‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	72	38	58·7	43·9	50·9	+ 0·6	62	0	3	0·10	−0·31	41‡	39‡
	Loughborough	71	39	59·0	43·0	50·5	+ 0·1	60	0	3	0·20	−0·26	*	*
	Leicester													
	Cheadle ℳ	66	35	56·2	40·5	47·9	− 0·6	48	4	3	0·23	−0·28	*	*
	Churchstoke ℳ	62	37	56·0	41·4	48·3	− 1·4	47	2	3	0·21	−0·20	41	39
	Hereford ℳ	69	36	59·8	41·8	50·3	− 0·3	59	1	3	0·15	−0·27	*	*
	Cirencester	63	?	54·9	?	?	?	?	?	3	1·11	+0·63	37	36
	Oxford	66	37	56·0	42·1	48·6	− 2·0	46	0	3	0·65	+0·24	39	38
5. ENGLAND, S.	London	69	38	58·4	42·9	50·2	− 1·3	57	0	1	0·18	−0·22	36‡	35‡
	Strathfield Turgiss ℳ	68	33	58·6	39·6	48·5	− 1·3	56	7	2	0·30	−0·08	*	*
	Dungeness	53	39	51·9	42·7	47·0	− 4·5	35	0	2	0·29	−0·11	*	*
	Hastings (St. Leonard's)	55	40	52·5	42·0	46·9	− 4·2	34	0	2	0·30	−0·13	53	50
	Southampton	65	38	57·5	42·7	49·7	− 1·3	54	0	2	0·49	+0·04	32	31
	Hurst Castle	53	36	51·7	43·3	47·3	− 4·2	37	0	4	0·24	−0·16	*	*
	Stowell ℳ	61	37	55·0	41·3	47·7	− 2·7	43	2	5	0·28	?	29‡	28‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	56	34	50·0	42·4	46·0	− 1·7	28	0	7	3·49†	+2·62	*	*
	Glasgow	56	37	52·6	42·3	47·1	− 0·3	36	0	6	0·90	+0·37	21	19
	Ardrossan	53	40	51·0	42·6	46·6	− 1·1	32	0	6	0·88	+0·37	*	*
	Glenlee ℳ	60	37	54·0	41·6	47·4	+ 0·6	39	1	6	1·71	?	*	*
	Douglas (Isle of Man)	59	37	53·2	42·2	47·4	− 0·8	38	0	4	0·72	+0·24	37	35
7. ENGLAND, N.W.	Newton Reigny (Penrith)	59	36	52·9	41·1	46·7	− 0·7	37	3	6	1·33	+0·91	27	25
	Barrow-in-Furness	53	40	50·6	42·7	46·4	− 3·3	31	0	5	0·38	−0·15	*	*
	Stonyhurst	60	36	52·9	41·3	46·8	− 2·1	37	2	5	0·43	−0·13	24	23
	Blackpool ℳ	56	40	52·2	43·4	47·5	− 2·7	39	0	5	0·51	+0·10	25	24
	Manchester	66	36	55·6	41·6	48·2	− 1·2	45	1	3	0·39	−0·11	*	*
	Liverpool Obsy (Bidston)	65	40	56·1	44·6	50·0	− 0·3	56	0	3	0·40	+0·02	*	*
	Llandudno ℳ	62	40	55·2	44·0	49·3	− 1·4	51	0	5	0·21	−0·18	31	30
	Holyhead	56	40	52·0	43·3	47·4	− 3·5	38	0	3	0·47	+0·06	*	*
8. ENGLAND, S.W.	Llandovery	60	34	55·3	40·4	47·4	− 3·6	45	4	6	0·54	−0·08	*	*
	Pembroke	51	43	48·7	44·0	46·2	− 4·4	29	0	3	0·42	−0·04	42	40
	Arlington (N. Devon)	55	35	52·1	40·9	46·2	− 3·5	34	3	6	0·62	−0·06	*	*
	Cullompton ℳ	65	33	57·6	41·9	49·3	− 1·9	52	0	3	0·39	−0·16	33	32
	Falmouth	59	41	51·8	43·7	48·9	− 1·9	48	0	4	0·57	−0·09	45	44
	Plymouth	58	38	56·0	44·5	49·9	− 1·9	55	0	5	0·77	+0·26	32	31
	Prawle Point	53	37	51·0	41·0	45·7	− 5·0	30	3	4	0·51	?	*	*
9. IRELAND, N.	Malin Head	58	38	51·6	42·4	46·7	− 1·8	33	0	7	0·93	?	*	*
	Londonderry	59	36	54·0	41·4	47·3	− 1·8	40	2	6	0·74	+0·21	*	*
	Mullaghmore	58	37	53·6	43·7	48·4	− 1·6	45	0	7	0·49	−0·02	*	*
	Belmullet	55	40	50·9	45·6	48·1	− 1·5	43	0	7	0·97	?	*	*
	Markree Castle	61	33	53·8	40·3	46·7	− 3·0	40	5	6	0·84	+0·34	32	30
	Brookeborough	61	30	54·2	40·0	46·7	− 3·0	41	6	5	0·56	?	*	*
	Armagh	63	34	56·5	41·4	48·5	− 0·9	48	2	5	0·63	+0·15	33	31
	Donaghadee	66	35	57·3	43·1	49·8	+ 0·3	55	0	3	0·43	−0·06	*	*
	Edgeworthstown	64	31	55·7	39·3	47·0	− 3·4	46	8	5	0·73	+0·21	*	*
10. IRELAND, S.	Dublin	69	37	58·2	43·8	50·6	+ 0·5	60	0	3	0·29	−0·16	45	43
	Parsonstown	66	34	55·3	40·9	47·7	− 2·2	45	3	3	0·50	0·00	43	41
	Kilkenny	68	32	56·9	39·7	47·8	− 2·4	50	6	3	0·58	+0·13	*	*
	Waterford	64	35	56·4	40·0	47·7	− 3·2	48	6	4	0·48	−0·10	*	*
	Roche's Point	58	41	53·3	44·1	48·4	− 2·5	45	0	4	0·93	+0·19	*	*
	Valencia	60	40	54·1	44·6	49·1	− 1·5	50	0	7	1·16	+0·45	40	38
	Killarney	64	38	55·3	42·6	48·6	− 2·0	46	0	5	1·28	?	*	*
	Foynes	63	43	54·4	?45·9	?49·9	−?0·1	?55	0	6	0·91	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's) ℳ	55	42	52·9	44·4	48·4	− 3·1	45	0	5	0·42	−0·05	*	*
	Jersey (Noirmont)	60	42	55·3	45·3	50·0	− 1·7	56	0	2	0·24	−0·16	55	54

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ℐ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 19.] *Second Series.* WEEK ENDING MONDAY, 14TH MAY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

DISTRICTS. (See p. 76.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
	°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	57	29	49·5	36·9	42·8	4 below.	27	− 7	14	+ 6	173	− 67	689	+190
1. SCOTLAND, EAST	68	30	55·6	37·4	45·9	1 below.	47	− 1	13	+ 7	245	− 96	681	+144
2. ENGLAND, N.E.	68	30	54·6	38·6	46·2	3 below.	44	− 4	10	+ 5	241	−104	555	+ 75
3. ENGLAND, EAST	68	29	58·7	36·6	47·6	4 below.	62	+ 1	15	+10	302	−157	659	+156
4. MIDLAND COUNTIES	71	29	59·8	37·5	48·0	3 below.	61	− 3	13	+ 6	310	−180	650	+150
5. ENGLAND, SOUTH	73	32	59·6	40·3	49·4	2 below.	59	− 8	5	+ 3	293	−227	577	+205
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	62	28	55·7	37·9	46·2	2 below.	47	− 4	11	+ 7	255	−128	505	+109
7. ENGLAND, N.W.	63	29	53·9	40·5	46·8	4 below.	40	−16	4	+ 1	228	−165	500	+118
8. ENGLAND, S.W.	69	30	58·0	41·3	49·2	2 below.	53	− 9	2	+ 1	303	−237	487	+254
9. IRELAND, NORTH	61	28	53·9	38·9	45·9	4 below.	40	−13	9	+ 6	305	−152	417	+ 69
10. IRELAND, SOUTH	66	30	56·9	42·3	49·2	2 below.	50	−11	0	− 2	398	−187	352	+114
— CHANNEL ISLANDS	66	43	55·2	45·5	50·5	2 below.	60	− 7	0	0	397	−213	247	+154

Rainfall. Bright Sunshine.

DISTRICTS. (See p. 76.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
		10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	5	4	1 less.	95	+10	15·0	−1·0	27	24	369	− 41	25	− 3
1. SCOTLAND, EAST	2	1	4 less.	80	+13	9·3	−0·8	65	58	417	− 41	28	− 3
2. ENGLAND, N.E.	0	less than ½	4 less.	70	+ 3	7·7	−0·9	67	61	386	+ 1	26	0
3. ENGLAND, EAST	0	less than ½	4 less.	70	+ 1	6·9	−1·2	66	62	390	− 96	26	− 6
4. MIDLAND COUNTIES	1	1	4 less.	63	− 2	6·6	−2·7	58	54	358	− 77	24	− 5
5. ENGLAND, SOUTH	1	less than ½	4 less.	64	0	7·6	−1·9	62	59	362	− 94	24	− 6
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	1	1	4 less.	65	−10	13·1	−2·9	69	63	456	+ 38	30	+ 2
7. ENGLAND, N.W.	0	less than ½	4 less.	71	+ 3	7·1	−4·0	58	53	396	− 17	26	− 2
8. ENGLAND, S.W.	1	1	5 less.	69	− 4	9·7	−5·5	62	59	473	− 32	31	− 3
9. IRELAND, NORTH	2	2	3 less.	73	− 9	10·0	−2·0	58	53	375	− 70	25	− 5
10. IRELAND, SOUTH	2	4	1 less.	63	−15	11·0	−3·5	49	46	460	− 41	31	− 3
— CHANNEL ISLANDS	1	less than ½	4 less.	83	+ 4	9·6	−2·1	81	78	517	− 94	34	− 6

General Remarks.

Weather has been much finer than that experienced for many weeks past. The sky, excepting in the extreme north of Scotland, has been comparatively cloudless and rain almost entirely absent.

Temperature, although sometimes high for the season during the day, fell quickly during the night-time, and on the whole has continued below the mean in all districts, the deficit ranging from 1° in "Scotland, E." to 4° in "Scotland, N.", "England, E.", "England, N.W.", and "Ireland, N." The highest of the maxima, which were recorded on the 8th at some stations and on the 13th at others, varied from 57° to 68° in Scotland, 61° to 66° in Ireland, and from 63° to 73° over England. The lowest of the minima, which were registered on the 9th in Ireland, the 10th in Scotland, and the 13th in most parts of England, ranged from 28° in "Scotland, W." and "Ireland, N.", to 32° in "England, S.", and to 43° in the "Channel Islands". Over all the more inland parts of the Kingdom sharp ground frosts were experienced.

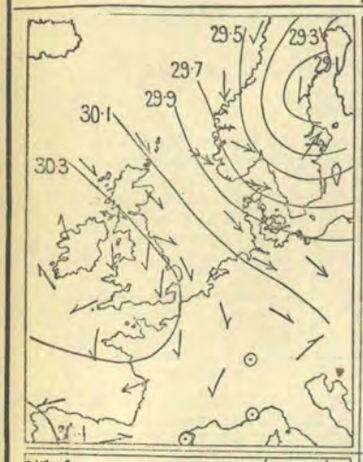
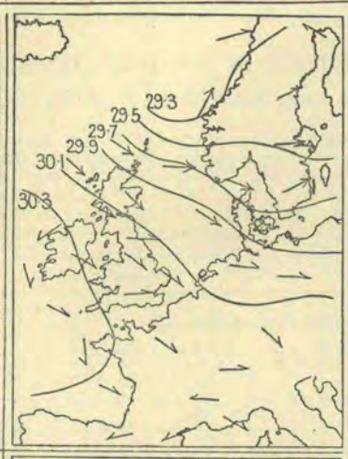
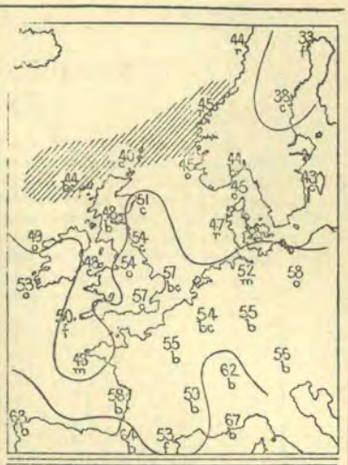
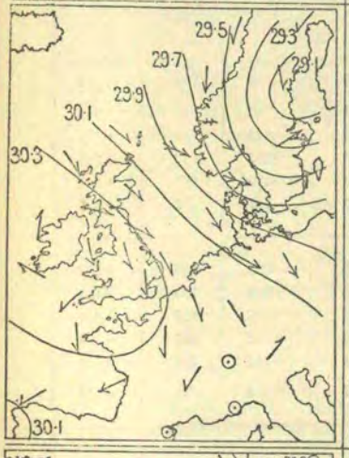
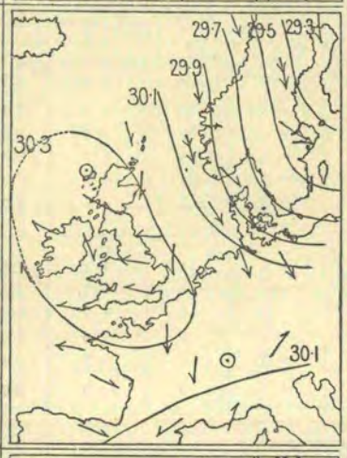
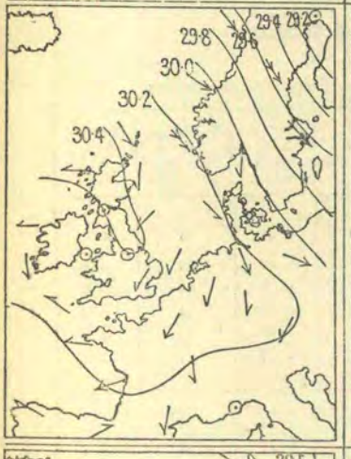
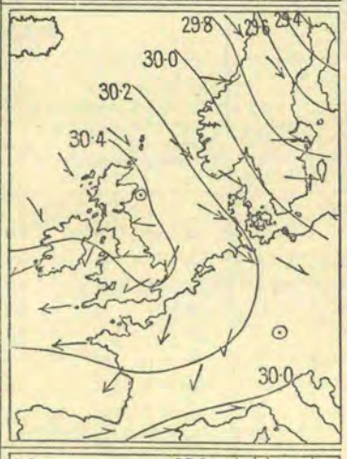
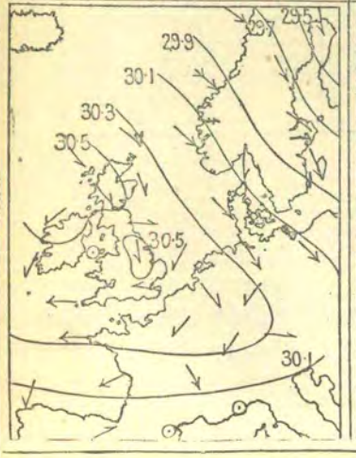
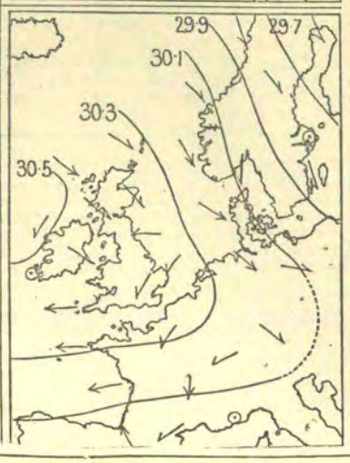
Rainfall has been less than the mean in all districts, the fall in most places being scarcely appreciable.

Bright sunshine shows a very large and general increase. The percentage of the possible amount of duration, which varied from 24 in "Scotland, N." to 46 in "Ireland, S." and to 78 in the "Channel Islands", has not been so high over the Kingdom generally since the week ending 27th June 1887, although that for the week ending 8th August 1887 was nearly as high.

Depressions observed.—At the commencement of the period a rather large depression was shown off the north-west of Norway, while a small secondary disturbance was moving eastwards over the North Sea. As these systems passed off, however, the distribution of pressure over our Islands became anticyclonic and no depressions appeared in our immediate neighbourhood until towards the close of the week, when some large systems travelled eastwards over Scandinavia, and there were also some indications of the approach of depressions towards our western coasts from the Atlantic. The wind, which at first blew from the Westward or North-Westward (strong to a gale in the north), subsequently became light or moderate from between East and North over the United Kingdom generally, although at the Scotch stations it continued chiefly Westerly to North-Westerly.

A 54295. 350.—5/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, May 8.** *Weather* dull on the eastern shores of the North Sea, with rain in the west of Norway, but fair or fine elsewhere. Fog prevailing over the English and Bristol Channels. Slight rain falling later on our extreme north and north-west coasts. *Temperature* fallen several degrees in the north and east of our Islands, but risen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 58° at Loughborough to 40° in the Shetlands. Subsequently rising to 66° at Oxford, 67° at Cambridge, and 70° in London. *Wind* Westerly over our Islands and the North Sea; strong to a gale on our extreme northern coasts. Moderate Easterly in the west and south of France. Subsequently veering to North-West in the north of our Islands. *Sea* rough in the extreme north, but moderate to smooth elsewhere. *Barometer* falling at all but our western and northern stations. Pressure highest over South Germany and the north of France, with a light and rather deep depression off the north-west of Norway. Depression subsequently moving eastwards.	
		**Wednesday, May 9.** *Weather* fair generally, but rainy at some of the Scandinavian stations, and dull on our west coast. Rain falling in Ireland later. *Temperature* fallen at all but the French stations; readings over our Islands ranging at 8 a.m. from 56° at Jersey and 55° at Valencia to 40° in the Shetlands. Maxima over England about 10° lower than on previous day. *Wind* North-Westerly over the North Sea and the adjacent coasts, but North-Easterly on our southern and French coasts; light or moderate in force generally, but strong to a gale in Norway and Denmark. *Sea* rather rough in the extreme north, but moderate to smooth elsewhere. *Barometer* rising at all but the Swedish stations. Anticyclone lying over the greater part of our Islands, with a deep depression over the southern part of the Gulf of Bothnia. Depression subsequently moving away to Russia, and rise of barometer extending to Sweden.	
		**Thursday, May 10.** *Weather* fair or fine generally, but rainy at some of our south-western stations. Rain ceasing later. *Temperature* risen a little in the north of our Islands, but fallen elsewhere; readings over the United Kingdom ranging at 8 a.m. from 52° at Valencia and 51° at Jersey to 42° in the Shetlands. *Wind* strong from the North-Westward in Scandinavia, and light from the same quarter on our east coasts, but moderate from the Eastward at our western, southern, and the French stations. *Sea* rather rough off the west of Norway, but slight or smooth elsewhere. *Barometer* rising at all but our western stations. Central portion of large anticyclone lying over Scotland, and deep depression over Finland. Rise taking place generally later.	
		**Friday, May 11.** *Weather* fair generally, but snow falling at Bodö, and rain at Christiansund. *Temperature* fallen a little in France and Germany, but changed irregularly elsewhere; readings over our Islands ranging at 8 a.m. from 54° at Valencia to 44° at Parsonstown and in London. *Wind* strong from North-West in Scandinavia and Denmark, and light from the same quarter in the north of our Islands, but moderate to strong from North-East or East at our southern and the French stations. *Sea* moderate to smooth generally. *Barometer* rising at all but the Scandinavian stations. Large anticyclone lying over our Islands, with areas of low pressure over the Mediterranean and Northern Europe. Slight fall taking place over the United Kingdom later.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

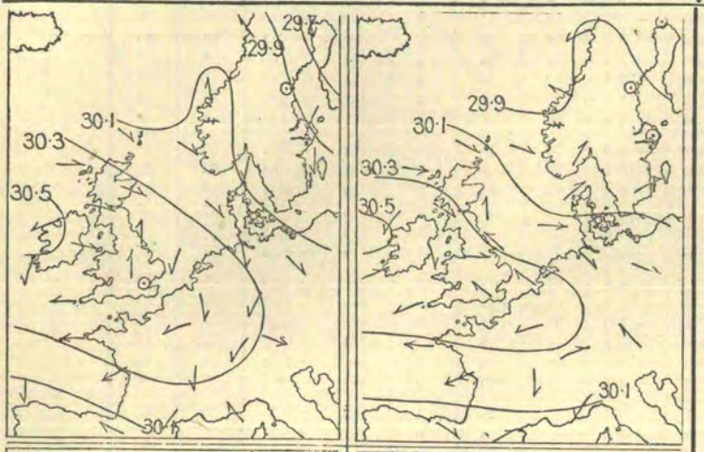
Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Saturday, May 12.

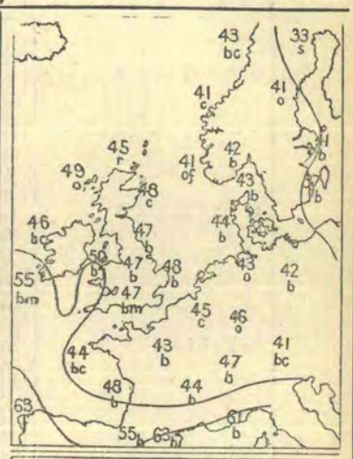
Weather dull at our extreme northern and some of the Scandinavian stations, with rain in the Shetlands, but fair or fine elsewhere.

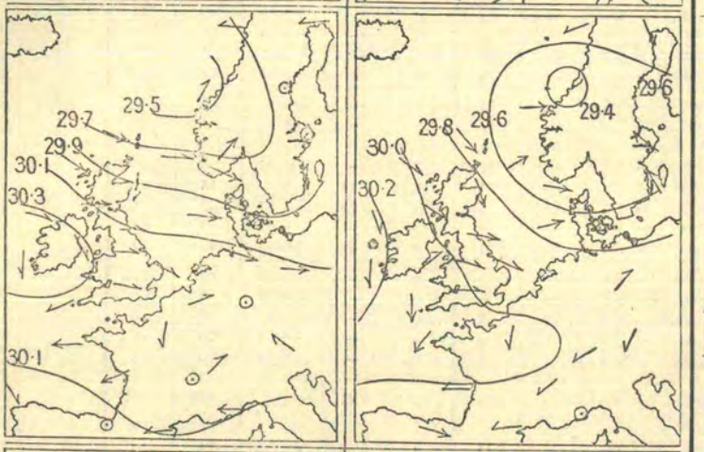
Temperature fallen in France, but risen a little in most other parts of Western Europe; readings over our Islands ranging at 8 a.m. from 55° at Valencia to 45° at Sumburgh Head, Malin Head, and Barrow-in-Furness.

Wind North-Westerly over the North Sea and our north and east coasts, but North-Easterly or Easterly at our southern and the French stations; strong over the Bay of Biscay.

Sea moderate to smooth.

Barometer rising at all but our extreme northern stations. Central portion of large anticyclone lying over Ireland, with relatively low pressures over Spain and Northern Europe. Slight fall taking place generally later.





Sunday, May 13.

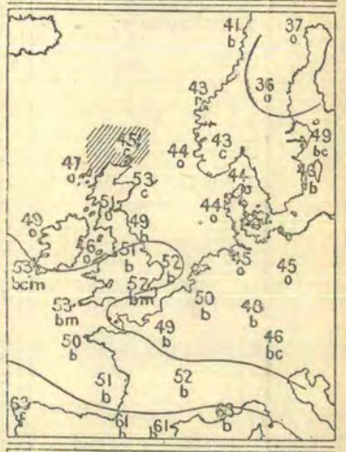
Weather fair generally but showery at some of the Scotch stations, and rainy at Christiansund. Rain falling later in many parts of Scandinavia.

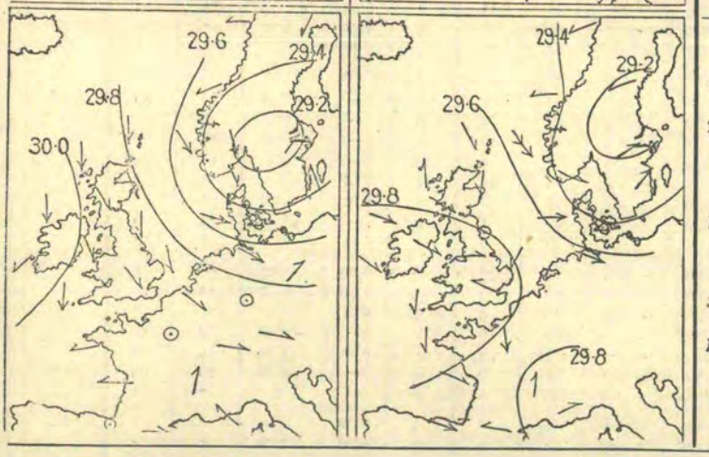
Temperature risen generally; readings over our Islands ranging at 8 a.m. from 56° at Jersey to 45° at Sumburgh Head and Parsonstown. Subsequently rising to 68° at Cambridge, 69° at Oxford, and 71° in London.

Wind strong from North-West or West over our north and east coasts and the eastern shores of the North Sea, but light from East or North-East at our southern and the French stations.

Sea rather rough in the extreme north, but slight or smooth elsewhere.

Barometer falling generally. Pressure highest in Ireland, with a well defined depression off the west of Norway. Depression subsequently moving south-eastwards, and barometer falling briskly over England.





Monday, May 14.

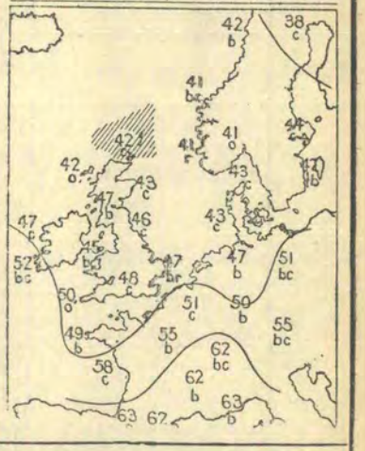
Weather fair or fine generally, but showers falling in the north of Scotland.

Temperature fallen at all but the French and German stations; readings over our Islands ranging at 8 a.m. from 52° at Valencia, Prawle Point, Jersey, and Hurst Castle to 41° at Nairn. Maxima over England from 10° to 15° lower than on previous day.

Wind chiefly North-Westerly or Northerly, but North-Easterly in the north of Scandinavia, and variable in the south of France. Subsequently backing to South-West on our extreme north-west coasts.

Sea rather rough at Sumburgh Head, but moderate to smooth elsewhere.

Barometer falling generally. Pressure highest off the west of Ireland, and depression of previous day now lying over the south of Sweden. Brisk fall taking place later on our extreme north-west coasts.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ⚓	49	34	46·6	37·9	42·0	− 3·7	13	11	7	0·52	+0·12	*	*
	Stornoway	52	32	48·6	38·4	43·2	− 3·5	24	10	4	0·49	−0·11	27	24
	Wick	53	31	50·1	37·1	43·2	− 3·2	29	14	6	0·26	−0·09	*	*
	Lairg ⚓	52	29	49·1	35·7	42·0	− 3·6	20	18	3	0·38	−0·13	*	*
	Glencarron ⚓	54	32	49·6	36·1	42·5	− 3·5	28	17	4	0·65†	?	?	?
	Fort Augustus ⚓	57	31	53·1	35·9	44·0	− 4·0	40	17	4	0·11†	?	*	*
1. SCOTLAND, E.	Nairn	57	35	51·9	38·3	44·7	− 3·0	34	10	5	0·23	−0·15	*	*
	Aberdeen	59	36	54·3	39·1	46·2	− 1·2	42	8	1	0·08	−0·34	63	56
	Braemar ⚓	59	30	54·2	34·7	43·9	− 0·6	44	20	2	0·20	−0·35	58‡	52‡
	Ochtertyre ⚓	68	30	60·1	34·7	46·6	− 0·8	63	20	1	0·14	−0·39	*	*
	Leith	65	34	57·6	39·0	47·7	− 1·6	53	8	1	0·03	−0·35	*	*
	Marchmont ⚓	63	34	55·7	38·3	46·5	− 0·4	47	10	1	0·09	−0·49	74	67
2. ENGLAND, N.E.	Alnwick Castle	58	33	51·3	37·0	43·7	− 4·3	33	14	0	—	−0·49	*	*
	Durham	67	30	57·5	35·3	45·7	− 2·8	54	14	0	—	−0·48	69	63
	Shields	60	35	53·0	39·9	46·1	− 2·5	38	6	0	—	−0·40	*	*
	Scarborough ⚓	64	34	54·4	38·3	45·9	− 3·3	43	10	1	0·03	−0·39	64‡	59‡
	York	68	35	59·4	39·3	48·8	− 0·7	59	8	0	—	−0·40	68	62
	Spurn Head	56	38	52·0	41·9	46·7	− 2·8	33	0	0	—	?	*	*
3. ENGLAND, E.	Hillington ⚓	66	29	59·4	34·9	46·7	− 3·7	63	20	1	0·02	−0·39	70	65
	Yarmouth	65	37	54·3	40·4	46·9	− 4·6	41	4	0	—	−0·41	*	*
	Geldeston	68	32	57·6	36·9	46·6	− 4·3	54	14	0	—	−0·38	69	64
	Cambridge	68	30	61·9	36·9	48·7	− 3·5	68	14	0	—	−0·40	61	57
	Rothamsted	68	31	60·1	38·1	48·4	− 2·2	61	11	0	—	−0·47	*	*
	Ingatestone	68	34	58·9	39·1	48·4	− 4·3	57	8	0	—	−0·39	64‡	60‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	66	29	59·9	33·9	46·1	− 4·5	63	23	0	—	−0·42	53‡	49‡
	Loughborough	69	33	61·1	39·3	49·6	− 1·6	65	8	0	—	−0·44	*	*
	Leicester												*	*
	Cheadle ⚓	63	36	55·5	38·1	46·3	− 3·4	46	11	0	—	−0·52	*	*
	Churchstoke ⚓	65	32	57·0	34·8	45·2	− 5·2	53	20	1	0·14	−0·28	55	51
	Hereford ⚓	71	33	62·9	39·2	50·3	− 1·1	70	8	2	0·19	−0·23	*	*
	Cirencester	67	32	62·0	30·4	48·4	− 2·6	68	16	1	0·07	−0·39	62	58
	Oxford	69	36	60·3	40·9	50·0	− 1·4	61	3	2	0·02	−0·40	63	59
5. ENGLAND, S.	London	71	34	61·7	41·6	51·1	− 1·3	65	1	0	—	−0·39	60‡	57‡
	Strathfield Turgiss ⚓	73	32	64·0	38·3	50·4	− 0·1	74	10	0	—	−0·35	*	*
	Dungeness	56	32	54·1	39·3	46·3	− 5·9	41	8	0	—	−0·40	*	*
	Hastings (St. Leonard's)	59	38	55·1	42·1	48·3	− 3·5	44	0	0	—	−0·42	75	71
	Southampton	72	35	63·2	40·8	51·3	− 0·4	70	3	0	—	−0·44	70	66
	Hurst Castle	58	?	56·4	?	?	?	?	?	0	—	−0·39	*	*
	Stowell ⚓	64	34	59·8	?39·6	?49·1	?− 2·2	?60	?7	1	0·01	?	44‡	42‡
6. SCOTLAND, W.	Laudale (Loch Sunart)												*	*
	Glasgow	62	36	55·7	38·6	46·6	− 1·7	46	10	1	0·08	−0·44	64	58
	Ardrossan	58	34	54·3	40·3	46·9	− 1·7	41	5	2	0·24	−0·26	*	*
	Glenlee ⚓	61	28	57·2	33·6	44·7	− 3·1	54	24	1	0·17	?	*	*
	Douglas (Isle of Man)	59	34	55·4	38·9	46·7	− 2·0	46	9	1	0·02	−0·40	74	68
7. ENGLAND, N.W.	Newton Reigny (Penrith)	63	29	55·3	34·6	44·3	− 4·1	47	21	0	—	−0·41	65	59
	Barrow-in-Furness	59	38	53·6	41·9	47·4	− 3·2	38	0	0	—	−0·42	*	*
	Stonyhurst	58	36	53·7	38·4	45·6	− 4·4	40	10	0	—	−0·48	52	48
	Blackpool ⚓	55	36	52·9	42·5	47·4	− 3·8	38	0	0	—	−0·42	60	55
	Manchester	61	35	55·2	38·6	46·4	− 4·4	45	10	1	0·01	−0·49	*	*
	Liverpool Obsy (Bidston)	56	40	53·6	43·1	48·0	− 3·4	42	0	1	0·01	−0·38	*	*
	Llandudno ⚓	56	38	53·6	41·5	47·2	− 4·4	39	1	0	—	−0·40	54	50
	Holyhead	59	41	52·9	43·0	47·7	− 3·9	40	0	1	0·01	−0·40	*	*
8. ENGLAND, S.W.	Llandovery	69	30	62·3	35·6	48·2	− 3·5	70	18	2	0·38	−0·23	*	*
	Pembroke	58	43	52·4	44·0	48·0	− 3·2	42	0	2	0·18	−0·27	53	50
	Arlington (N. Devon)	62	36	56·9	39·7	47·8	− 2·9	50	6	2	0·11	−0·56	*	*
	Cullompton ⚓	68	33	62·2	38·9	50·2	− 1·9	70	9	0	—	−0·48	59	56
	Falmouth	60	41	55·2	44·0	49·3	− 2·4	51	0	1	0·01	−0·62	72	69
	Plymouth	67	40	61·2	44·1	52·1	− 0·6	71	0	0	—	−0·48	63	60
	Prawle Point	61	40	55·6	42·9	48·9	− 2·3	48	0	0	—	?	*	*
9. IRELAND, N.	Malin Head	50	40	49·1	42·7	45·7	− 3·2	26	0	3	0·19	?	*	*
	Londonderry	61	33	56·1	38·9	47·0	− 2·8	48	9	2	0·20	−0·34	*	*
	Mullaghmore	55	37	53·1	41·4	46·9	− 4·0	37	2	3	0·38	−0·16	*	*
	Belmullet	54	39	51·1	42·1	46·3	− 4·0	30	0	3	0·36	?	*	*
	Markree Castle	58	28	53·2	34·6	43·3	− 7·2	40	21	2	0·19	−0·29	52	48
	Brookeborough	60	29	56·6	34·0	44·6	− 5·9	52	22	2	0·16	?	*	*
	Armagh	59	33	57·0	36·0	45·9	− 4·4	53	17	2	0·10	−0·35	63	58
	Donaghadee	57	44	52·4	44·9	48·3	− 1·6	44	0	2	0·09	−0·40	*	*
	Edgeworthstown	61	32	56·3	35·9	45·5	− 5·4	50	17	2	0·17	−0·35	*	*
10. IRELAND, S.	Dublin	60	39	56·6	41·8	48·5	− 2·3	46	1	1	0·23	−0·20	60	56
	Parsonstown	64	30	58·3	37·9	47·8	− 3·1	58	11	1	0·20	−0·30	43	40
	Kilkenny	63	36	56·7	40·3	48·0	− 3·2	49	5	1	0·47	+0·05	*	*
	Waterford	66	34	59·1	40·0	49·0	− 3·0	57	6	1	0·33	−0·20	*	*
	Roche's Point	59	40	54·0	43·7	48·5	− 3·4	46	0	3	0·19	−0·52	*	*
	Valencia	61	43	56·9	47·4	51·9	+ 0·7	69	0	2	0·53	−0·12	45	42
	Killarney	65	35	57·9	42·3	49·6	− 1·7	53	0	3	0·57	?	*	*
	Foynes	63	41	55·6	44·8	49·9	− 0·9	55	0	2	0·70	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	56	45	53·9	46·3	49·9	− 2·3	55	0	1	0·01	−0·38	*	*
	Jersey (Noirmont)	66	43	58·4	44·6	51·1	− 1·6	64	0	0	—	−0·39	81	78

Stations marked ⚓ are in connection with the Royal Meteorological Society, and those marked ⚓ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 20.] *Second Series.* WEEK ENDING MONDAY, 21ST MAY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 80.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	77	35	57·5	42·4	49·5	2 above.	53	+14	0	− 7	226	− 52	689	+184
	1. SCOTLAND, EAST	78	35	60·2	43·2	51·1	3 above.	64	+ 9	0	− 6	309	− 82	681	+139
	2. ENGLAND, N.E.	78	37	61·0	45·3	52·7	3 above.	75	+19	0	− 4	316	− 83	555	+ 73
	3. ENGLAND, EAST	77	32	64·3	46·5	54·9	3 above.	90	+21	0	− 4	392	−136	659	+153
	4. MIDLAND COUNTIES	80	32	65·1	43·6	53·7	2 above.	82	+11	0	− 5	392	−168	650	+147
	5. ENGLAND, SOUTH	76	34	62·7	46·9	54·3	2 above.	86	+11	0	− 1	379	−218	577	+204
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	77	33	59·2	45·0	51·7	2 above.	68	+11	0	− 3	323	−116	505	+107
	7. ENGLAND, N.W.	79	36	62·2	46·1	53·7	2 above.	82	+20	0	− 2	310	−145	500	+117
	8. ENGLAND, S.W.	73	31	59·6	45·4	52·0	1 below.	70	+ 1	0	− 1	373	−237	487	+254
	9. IRELAND NORTH	71	39	58·6	44·4	51·1	0 (average).	64	+ 5	0	− 2	369	−147	417	+ 68
	10. IRELAND, SOUTH	67	39	58·2	46·7	52·1	0 (average).	71	+ 4	0	− 1	469	−185	352	+113
	— CHANNEL ISLANDS	67	39	59·8	46·9	53·0	1 below.	77	+ 4	0	0	474	−211	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 80.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	5	7	2 more.	100	+11	15·7	−0·8	35	30	404	− 53	25	− 4
	1. SCOTLAND, EAST	4	7	2 more.	84	+13	10·0	−0·5	41	36	458	− 49	29	− 3
	2. ENGLAND, N.E.	3	2	2 less.	73	+ 3	8·0 *	−1·0	38	34	424	− 17	26	− 2
	3. ENGLAND, EAST	3	5	1 more.	73	+ 1	7·4	−1·1	48	44	438	−109	27	− 7
	4. MIDLAND COUNTIES	2	3	1 less.	65	− 3	6·9	−2·8	40	36	398	− 88	25	− 5
	5. ENGLAND, SOUTH	3	9	5 more.	67	+ 1	8·5	−1·4	41	38	403	−107	25	− 7
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	5	12	6 more.	71 *	− 8	14·4 *	−2·1	28	25	484	+ 15	30	+ 1
	7. ENGLAND, N.W.	3	3	2 less.	74	+ 2	7·4	−4·1	35	32	431	− 38	27	− 2
	8. ENGLAND, S.W.	4	7	2 more.	73	− 2	10·4	−5·3	40	37	513	− 51	32	− 3
	9. IRELAND, NORTH	4	7	2 more.	77	− 9	10·7	−1·8	34	30	409	− 87	25	− 6
	10. IRELAND, SOUTH	5	10	4 more.	68	−14	12·0	−3·1	37	34	500 *	− 58	31	− 4
	— CHANNEL ISLANDS	5	6	2 more.	88	+ 6	10·2	−1·9	51	48	568	−103	35	− 7

General Remarks.

Weather has been cloudy and somewhat unsettled in most of the western and north-western parts of the Kingdom, but generally fair elsewhere. Thunderstorms were experienced, however, in different parts of the country on the 18th or 19th, those in Scotland being very severe.

Temperature has continued a little below the mean in "England, S.W." and the "Channel Islands", but has about equalled the normal for the season in Ireland, while in Scotland and all the other English districts it has been 2° or 3° above. It was very high over Great Britain on the 19th, when maxima of 77° or 78° were recorded in Scotland and between 77° and 80° in most parts of England. In Ireland, the south-west of England, and the "Channel Islands", the maxima for the week were lower, ranging from 67° to 73°. The lowest of the minima were generally registered on the 15th, when the thermometer fell to 31° in "England, S.W.", to 32° in "England, E." and the "Midland Counties", and to between 33° and 37° in most other districts. In Ireland and the "Channel Islands" the lowest reading was 39°.

Rainfall has been rather less than the mean in "England, N.E.", the "Midland Counties", and "England, N.W.", but more in all other districts.

Bright sunshine shows a considerable decrease on that recorded last week, the percentage of the possible amount of duration ranging from 25 in "Scotland, W." to 44 in "England, E.", and 48 in the "Channel Islands".

Depressions observed.—During nearly the whole of this period a series of depressions moved in a north-north-easterly direction outside our western and north-western coasts, while a few shallow subsidiary disturbances passed more directly over our Islands. Under these conditions fresh to strong winds between South-East and South-West were very prevalent over the United Kingdom; on some parts of our western coasts the force of a moderate to fresh gale was attained at times. Towards the end of the week, however, the barometer rose generally and the distribution of pressure over our Islands became anticyclonic and the winds light and variable.

* This value has been altered owing to the receipt of further information.

A 54360. 350.—5/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

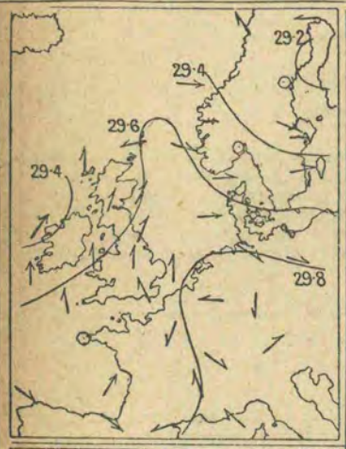
Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Tuesday, May 15.

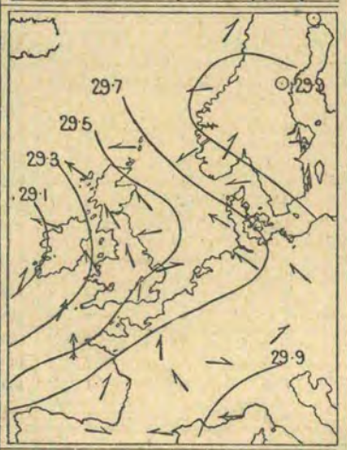
Weather fair in the south of our Islands, as well as at many of the Continental stations, but rainy in Scotland and the north of Ireland as well as at Munich and Belfort.

Temperature fallen a little in France and Germany, but changed little and irregularly elsewhere; readings over our Islands ranging at 8 a.m. from 53° at Cambridge to 41° at Wick. Maxima over central England a little above 60°, but much lower elsewhere.

Wind chiefly Southerly in our Islands, but Westerly on the eastern shores of the North Sea as well as in Spain, and North-Easterly in the north of France; light or moderate in force generally, but strong on our extreme western coasts.

Sea rather rough off the west of Ireland, but slight or smooth elsewhere.

Barometer falling in our Islands and France, but rising elsewhere. Pressure highest in the south-east of France, with a depression over the Gulf of Bothnia and another off the west of Ireland. Shallow secondary disturbances advancing northwards later over France and the Bay of Biscay.



Wednesday, May 16.

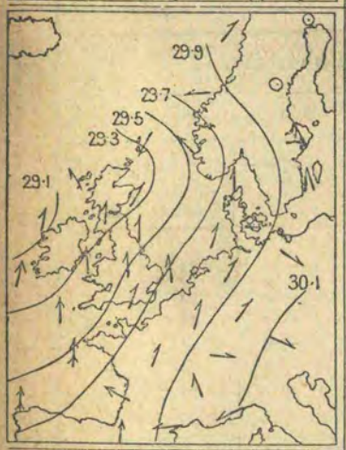
Weather rainy at several of our western and the French stations, but fair or fine elsewhere. Rain falling generally later.

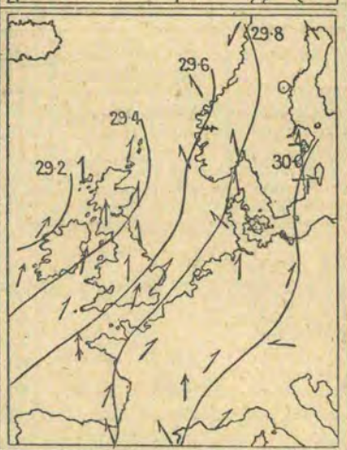
Temperature risen at all but our western stations; readings over our Islands ranging at 8 a.m. from 60° at Cambridge to 43° in the Shetlands. Maxima over central England varying between 60° and 66°.

Wind chiefly South-Easterly or Southerly; strong on our extreme south-west coasts, but light or moderate elsewhere.

Sea rough on our extreme south-west coasts, but moderate to smooth elsewhere.

Barometer rising at all but our western and south-western stations. Pressure highest over central Europe, with a rather deep depression off the south-west of Ireland. Depression subsequently moving slowly northwards, but secondary disturbances appearing over England.





Thursday, May 17.

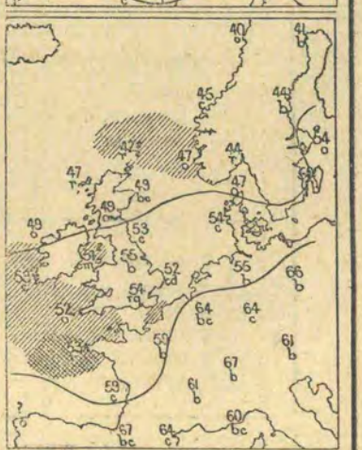
Weather rainy in the north of Scotland, the extreme south of England, and the north of France, but fair or fine elsewhere. Rain falling in most places later, and thunder heard in the north of Ireland.

Temperature risen generally; readings over our Islands ranging at 8 a.m. from 55° at York to 42° in the Shetlands. Subsequently rising above 60° in all the more eastern parts of Great Britain.

Wind moderate South-Easterly or Easterly in Scandinavia, and the north of Scotland, but fresh or strong from the Southward elsewhere, with gales over the Channel and Bay of Biscay.

Sea rough on our south-western, southern, and extreme northern coasts generally.

Barometer falling in Norway and the northern parts of our Islands, but rising elsewhere. Pressure high over Northern and Central Europe, depression of previous day now lying off the north-west of Ireland. Rise taking place generally later, and depression continuing to move slowly northwards.



Friday, May 18.

Weather fine in Denmark, Germany, and the east of Scotland, and fair in France, but cloudy elsewhere, with rain in many parts of England and Ireland. Thunder and lightning observed over England at night.

Temperature risen generally; readings over our Islands ranging at 8 a.m. from 60° at Cambridge to 49° at Donaghadee. Subsequently rising to 72° at Loughborough, Oxford, and Cambridge, and 75° in London.

Wind South-Easterly or Southerly, strong in force on our south-west coast, but light or moderate elsewhere.

Sea rather rough at several of our western and south-western stations.

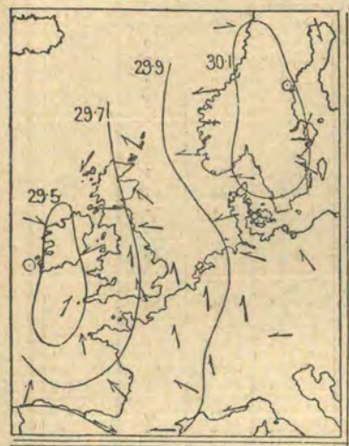
Barometer falling in the north of Scandinavia, and also in Spain and the south-west of France, but rising elsewhere. Large area of high pressure lying over Central and Southern Europe, with lowest readings in the extreme west of our Islands. Slight fall taking place over Ireland and England later.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

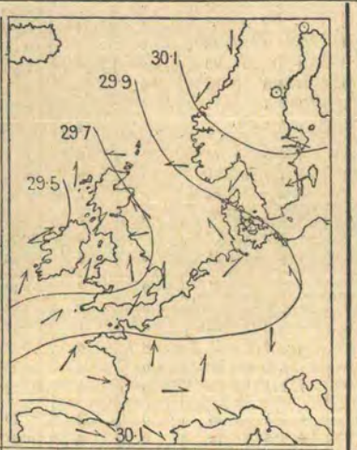
Synoptic Charts.

PRESSURE AND WIND.

8 a.m.



6 p.m.



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, May 19.

Weather cloudy in our Islands and the west of France, with showers in the north of Ireland and thunder and lightning at some of the Scotch stations. Thunderstorms occurring later in many parts of the Kingdom.

Temperature fallen in France and the north-east of England, but risen elsewhere; readings over our Islands ranging at 8 a.m. from 69° at Cambridge to 49° at Aberdeen and Malin Head. Subsequently rising above 75° over the central parts of Great Britain, but sudden fall taking place over England in evening.

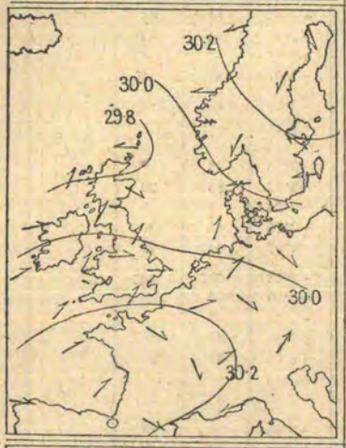
Wind chiefly South-Easterly but variable in Ireland and South-Westerly or Westerly in Spain and the south-west of France; strong in force over the Bay of Biscay. Subsequently veering to the Westward on all our western and southern coasts.

Sea rather rough off the north-west of France, but moderate to smooth elsewhere.

Barometer rising at all but the English stations. Large anticyclone lying over Scandinavia, with a shallow elongated depression over Ireland. Depression subsequently moving northwards, and barometer rising briskly at all our southern stations.

Synoptic Charts.

TEMPERATURE AND WEATHER at 8 a.m.



Sunday, May 20.

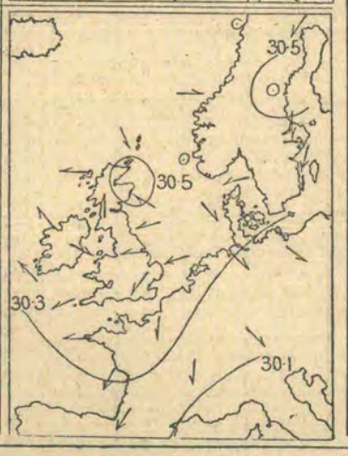
Weather fair and fine generally, but rainy in the south of Denmark and also at Wick. A little rain falling later at several of our northern stations.

Temperature fallen at all but the Norwegian and Danish stations; readings over our Islands ranging at 8 a.m. from 58° at Yarmouth to 50° at Wick, Ardrossan, Pembroke, and Prawle Point. Subsequently rising a little above 65° over Central England.

Wind moderate South-Westerly in our Islands, but light Easterly or South-Easterly in Scandinavia, and variable in the south of France. Backing to South-East at Valencia in evening.

Sea moderate to smooth, except at Brest.

Barometer rising generally. Areas of high pressure lying respectively over Sweden and France, with a shallow depression off the north of Scotland. Rise continuing all day, and southern high pressure system extending northwards.



Monday, May 21.

Weather fair or fine generally, but dull on the eastern shores of the North Sea, and foggy at Sumburgh Head and Pembroke.

Temperature fallen several degrees in Germany, Denmark, and the south of Sweden, but changed irregularly elsewhere; readings over our Islands ranging at 8 a.m. from 61° at Leith to 48° at Pembroke and 47° at Sumburgh Head. Subsequently rising to a little above 70° over Central England.

Wind moderate South-Easterly on our western coasts, but North-Westerly or Northerly at our eastern stations, as well as on the eastern shores of the North Sea, and North-Easterly in the south of France.

Sea slight or smooth generally.

Barometer rising at all stations. Two well-defined anticyclones lying respectively over Great Britain and the north of France, and over the north of Sweden. Slight fall setting in over France later.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°	°	Inches.	Inches.		
Week ending May 14	Laudale	60	33	55·6	38·5	46·5	− 2·1	46	10	4	0·27	− 0·61	*	*

III.—DATA from which the SUMMARY on page 77 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	55	35	49·9	40·6	45·0	− 1·6	27	4	4	0·46	+0·07	*	*
	Stornoway	64	37	55·6	42·3	48·6	+ 1·1	46	0	5	0·60	0·00	35	30
	Wick	63	38	55·9	41·4	48·2	+ 1·0	46	2	6	1·09	+0·72	*	*
	Lairg ℌ	69	36	59·9	43·0	50·9	+ 4·3	62	0	5	0·31	−0·19	*	*
	Glencarron ℌ	73	36	61·6	43·7	52·1	+ 5·1	71	0	5	0·71†	?	?	?
	Fort Augustus ℌ	77	36	61·8	43·4	52·1	+ 3·1	71	0	4	1·00†	?	*	*
1. SCOTLAND, E.	Nairn	78	37	63·1	42·7	52·3	+ 3·5	72	0	3	0·17	−0·22	*	*
	Aberdeen	60	40	56·0	43·4	49·3	+ 1·1	51	0	5	0·46	+0·04	40	35
	Braemar ℌ	72	35	58·4	41·4	49·4	+ 3·5	54	2	5	1·11	+0·53	43‡	37‡
	Ochtertyre ℌ	74	37	61·6	43·0	51·7	+ 2·8	68	0	5	1·71	+1·18	*	*
	Leith	66	39	60·7	44·3	52·0	+ 1·9	70	0	4	0·33	−0·05	*	*
	Marchmont ℌ	72	38	61·1	44·1	52·1	+ 4·1	71	0	4	0·35	−0·23	39	35
2. ENGLAND, N.E.	Alnwick Castle	65	37	58·1	44·1	50·7	+ 1·8	61	0	2	0·17	−0·31	*	*
	Durham	74	37	64·3	43·4	53·2	+ 3·6	78	0	2	0·06	−0·42	34	30
	Shields	66	40	59·0	44·6	51·4	+ 1·9	66	0	1	0·07	−0·33	*	*
	Scarborough ℌ	66	39	60·8	46·2	53·1	+ 2·9	78	0	4	0·26	−0·16	?‡	?‡
	York	78	39	66·4	46·0	55·6	+ 3·8	95	0	4	0·29	−0·10	42	38
	Spurn Head	62	41	57·3	47·3	52·0	+ 1·2	70	0	4	0·40	?	*	*
3. ENGLAND, E.	Hillington ℌ	77	34	66·8	46·4	56·0	+ 5·1	98	0	3	0·40	−0·01	49	44
	Yarmouth	65	40	57·6	47·6	52·3	+ 0·5	72	0	4	0·67	+0·26	*	*
	Geldeston	73	35	64·8	47·1	55·4	+ 3·2	94	0	4	0·54	+0·15	51	46
	Cambridge	77	39	67·6	46·9	56·6	+ 4·0	102	0	3	0·29	−0·11	44	40
	Rothamsted	73	32	64·2	44·5	53·8	+ 1·6	83	0	2	0·72	+0·25	*	*
	Ingatestone	72	38	65·0	46·3	55·1	+ 1·9	92	0	3	0·32	−0·07	48‡	44‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	80	33	69·3	39·6	53·9	+ 2·1	93	7	2	0·17	−0·25	40‡	36‡
	Loughborough	76	36	66·7	46·0	55·7	+ 3·5	96	0	2	0·34	−0·11	*	*
	Leicester													
	Cheadle ℌ	74	36	62·3	44·0	52·6	+ 1·2	74	0	2	0·19	−0·33	*	*
	Churchstoke ℌ	75	34	63·5	42·0	52·1	+ 0·9	71	0	2	0·26	−0·16	36	32
	Hereford ℌ	76	36	65·7	44·8	54·6	+ 2·2	88	0	2	0·20	−0·23	*	*
	Cirencester	72	32	63·4	42·3	52·2	0·0	71	0	2	0·60	+0·14	41	37
	Oxford	74	40	64·7	46·6	55·1	+ 2·5	92	0	3	0·48	+0·07	44	40
5. ENGLAND, S.	London	76	41	67·4	48·4	57·3	+ 3·8	107	0	2	0·42	+0·02	43‡	40‡
	Strathfield Turgiss ℌ	75	34	66·9	44·3	54·9	+ 3·1	90	0	4	1·14	+0·79	*	*
	Dungeness	64	43	57·9	47·1	52·2	− 0·9	71	0	3	0·65	+0·25	*	*
	Hastings (St. Leonard's)	69	43	61·1	48·8	54·6	+ 1·7	88	0	5	0·62	+0·21	43	40
	Southampton	69	42	63·0	47·5	54·8	+ 2·0	90	0	2	1·40	+0·95	41	38
	Hurst Castle	69	42	60·9	47·0	53·5	+ 0·6	81	0	3	0·98	+0·60	*	*
	Stowell ℌ	69	35	61·5	44·9	52·7	+ 1·0	75	0	5	0·95	?	36‡	33‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	72	44	59·3	48·1	53·4	+ 4·2	80	0	5	1·26†	+0·38	*	*
	Glasgow	68	41	60·2	46·2	52·8	+ 3·7	76	0	4	1·47	+0·95	25	22
	Ardrossan	70	41	57·7	45·6	51·3	+ 1·8	65	0	5	0·86	+0·46	*	*
	Glenlee ℌ	77	33	61·7	41·1	50·8	+ 1·9	65	3	5	1·62	?	*	*
	Douglas (Isle of Man)	64	37	56·9	43·8	50·0	+ 0·4	56	0	4	0·69	+0·27	31	28
7. ENGLAND, N.W.	Newton Reigny (Penrith)	76	36	63·0	43·4	52·6	+ 3·3	74	0	3	0·36	−0·05	40	36
	Barrow-in-Furness	73	42	59·0	46·4	52·3	+ 0·8	72	0	4	0·28	−0·12	*	*
	Stonyhurst	76	39	61·6	45·5	53·1	+ 1·7	78	0	3	0·14	−0·45	34	30
	Blackpool ℌ	79	40	62·3	47·1	54·2	+ 1·7	85	0	3	0·39	−0·03	32	29
	Manchester	78	36	64·2	46·4	54·8	+ 2·7	90	0	4	0·36	−0·05	*	*
	Liverpool Obsy (Bidston)	79	40	64·0	47·3	55·2	+ 2·8	92	0	2	0·07	−0·32	*	*
	Llandudno ℌ	77	41	63·6	46·7	54·6	+ 1·9	88	0	3	0·23	−0·16	34	31
	Holyhead	72	43	60·1	46·1	52·7	+ 0·6	75	0	5	0·29	−0·12	*	*
8. ENGLAND, S.W.	Llandovery	73	37	66·0	46·4	55·6	+ 3·3	95	0	3	0·56	−0·05	*	*
	Pembroke	58	42	53·9	46·6	50·0	− 1·9	56	0	3	0·21	−0·23	39	35
	Arlington (N. Devon)	66	31	59·7	43·9	51·3	− 0·5	65	0	4	0·58	−0·08	*	*
	Cullompton ℌ	68	32	62·7	42·9	52·1	− 1·1	71	0	4	1·25	+0·78	34	31
	Falmouth	61	37	57·8	45·8	51·1	− 1·5	64	0	5	0·60	−0·01	44	41
	Plymouth	67	38	62·0	47·7	54·4	+ 0·7	87	0	4	1·06	+0·60	42	39
	Prawle Point	59	39	54·9	44·7	49·5	− 2·4	53	0	3	0·63	?	*	*
9. IRELAND, N.	Malin Head	65	41	56·7	45·0	50·5	+ 1·0	60	0	5	0·54	?	*	*
	Londonderry	71	42	63·4	44·4	52·9	+ 2·1	76	0	5	0·26	−0·28	*	*
	Mullaghmore	67	41	58·1	44·6	51·0	− 1·1	63	0	5	0·80	+0·22	*	*
	Belmullet	62	45	55·1	47·1	50·9	− 0·1	62	0	4	1·03	?	*	*
	Markree Castle	67	42	58·6	44·2	51·0	− 0·6	63	0	5	1·16	+0·70	35	31
	Brookeborough	63	39	59·0	42·3	50·2	− 1·2	57	0	5	0·74	?	*	*
	Armagh	66	40	60·0	43·9	51·5	+ 0·2	67	0	3	0·42	−0·02	33	29
	Donaghadee	66	42	57·7	45·0	51·0	+ 0·3	63	0	2	0·40	−0·09	*	*
	Edgeworthstown	67	40	60·1	42·7	50·8	− 0·5	62	0	5	0·91	+0·40	*	*
10. IRELAND, S.	Dublin	66	42	62·2	47·4	54·4	+ 2·6	87	0	4	0·15	−0·28	39	35
	Parsonstown	67	42	60·1	45·9	52·6	+ 0·5	74	0	5	0·54	+0·04	34	31
	Kilkenny	64	41	58·6	45·7	51·8	− 0·1	69	0	5	0·70	+0·29	*	*
	Waterford	63	40	58·4	45·7	51·7	− 1·4	68	0	5	0·86	+0·35	*	*
	Roche's Point	56	42	53·7	47·4	50·4	− 2·8	59	0	5	1·52	+0·83	*	*
	Valencia	58	45	55·4	47·9	51·4	− 0·8	66	0	5	0·92	+0·27	38	35
	Killarney	64	39	58·0	46·6	52·0	0·0	70	0	5	1·73	?	*	*
	Foynes	65	42	58·8	47·2	52·7	+ 1·0	75	0	4	1·45	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	59	42	57·0	46·1	51·2	− 2·0	64	0	6	0·31	−0·06	*	*
	Jersey (Noirmont)	67	39	62·6	47·6	54·7	+ 0·8	89	0	4	0·89	+0·50	51	48

Stations marked ℌ are in connection with the Royal Meteorological Society, and those marked ℌ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

NOTE.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 21.] *Second Series.* WEEK ENDING MONDAY, 28TH MAY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

DISTRICTS. (See p. 84.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
	°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	72	27	54·4	39·0	46·3	2 below.	43	0	8	+ 3	269	− 58	697	+189
1. SCOTLAND, EAST	71	30	57·4	39·0	47·6	2 below.	52	− 9	8	+ 3	361	− 97	689	+146
2. ENGLAND, N.E.	71	33	54·3	41·9	47·7	4 below.	40	−23	0	− 3	356	−112	555	+ 73
3. ENGLAND, EAST	70	31	53·2	41·2	49·2	4 below.	54	−17	2	− 1	446	−162	661	+154
4. MIDLAND COUNTIES	71	35	62·8	40·7	51·1	2 below.	69	− 8	4	+ 1	461	−180	654	+150
5. ENGLAND, SOUTH	72	36	62·0	43·1	52·0	2 below.	70	−13	0	− 1	449	−235	577	+204
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	74	34	62·8	43·1	52·4	2 above.	73	+10	0	− 2	396	−111	505	+107
7. ENGLAND, N.W.	72	32	61·5	44·2	52·4	0 (average).	73	+ 4	0	− 1	383	−146	500	+117
8. ENGLAND, S.W.	74	35	63·0	45·5	53·7	0 (average).	82	+ 6	0	0	445	−236	487	+254
9. IRELAND NORTH	74	37	63·5	45·1	53·8	2 above.	83	+18	0	− 1	452	−131	417	+ 67
10. IRELAND, SOUTH	73	38	66·6	45·5	55·5	2 above.	95	+22	0	− 1	564	−166	352	+113
— CHANNEL ISLANDS	66	42	59·2	48·3	53·5	1 below.	81	+ 1	0	0	555	−215	247	+154

Rainfall. Bright Sunshine.

DISTRICTS. (See p. 84.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
		10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	3	2	3 less.	103	+10	15·9	−1·1	65	55	469	− 34	27	− 2
1. SCOTLAND, EAST	1	1	4 less.	85	+11	10·1	−0·9	54	47	512	− 40	30	− 3
2. ENGLAND, N.E.	1	1	4 less.	74	+ 1	8·1	−1·4	47	41	470 *	− 33	27	− 2
3. ENGLAND, EAST	0	–	4 less.	73	− 2	7·4	−1·5	47	42	485	−122	28	− 7
4. MIDLAND COUNTIES	0	–	5 less.	65	− 7	6·9	−3·3	59	53	457	− 80	26	− 5
5. ENGLAND, SOUTH	1	less than ½	4 less.	68	− 3	8·5	−1·8	58	53	461	−102	27	− 6
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	0	–	5 less.	71	−12	14·4	−2·6	67	58	551	+ 31	32	+ 2
7. ENGLAND, N.W.	0	–	5 less.	74	− 1	7·4	−4·6	64	57	495	− 28	29	− 1
8. ENGLAND, S.W.	0	–	5 less.	73	− 6	10·4	−5·9	79	72	502	− 20	34	− 2
9. IRELAND, NORTH	1	less than ½	5 less.	78	−13	10·7	−2·3	73	64	482	− 55	28	− 3
10. IRELAND, SOUTH	1	1	5 less.	69	−17	12·1	−3·5	79	70	579	− 24	34	− 1
— CHANNEL ISLANDS	2	1	3 less.	90	+ 4	10·3	−2·2	76	70	644	− 90	37	− 6

General Remarks.

Weather has been fine and dry in all parts of the Kingdom, and the sky generally free from cloud.

Temperature has been from 2° to 4° below the mean in the "Wheat-producing" districts, but rather above in most of the "Grazing" districts. The highest of the maxima, which were recorded either on the 23rd or 24th, varied from 66° in the "Channel Islands" to 74° in "Scotland, W.", "England, S.W.", and "Ireland, N." The lowest of the minima were generally registered on the 27th or 28th, when the thermometer fell to between 27° and 34° in Scotland, 37° and 38° in Ireland, and 31° and 36° over England. At most of the inland stations some sharp ground frosts were experienced. The low average in the "Wheat-producing" districts was chiefly due to the prevalence of very cold nights, the daily maxima in many cases being rather high for the season.

Rainfall has been almost entirely absent over England, but some very slight falls have occurred in Ireland and Scotland.

Bright sunshine shows a very general and decided increase, the percentage of the possible amount of duration ranging from 41 to 55 in the eastern and northern districts, and from 57 to 72 in the west and south-west.

Depressions observed.—During nearly the whole of this period the distribution of pressure over our Islands and their neighbourhood was anticyclonic, but towards its close the conditions became somewhat irregular, and on the 27th a small depression appeared over Scotland from the westward, and on the following day a shallow area of low pressure lay off our south-west coasts. Light breezes from between North and East were most prevalent over the United Kingdom, but as the week drew on the wind became more variable in direction, although it continued light in force.

* This value has been altered owing to the receipt of further information.

A 54455. 350.—5/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

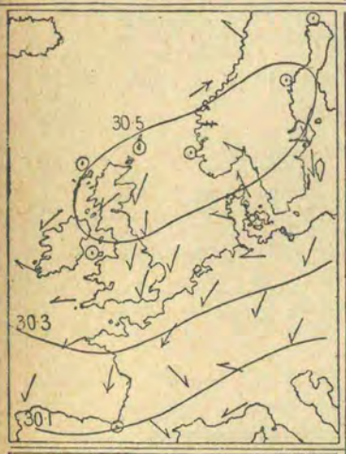
Weather

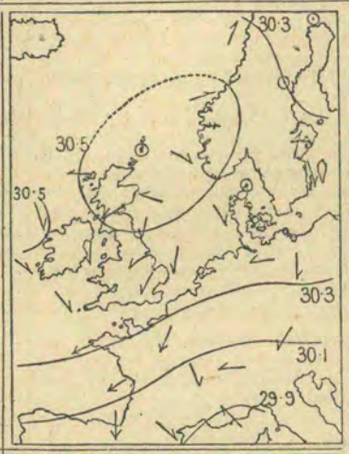
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, May 22.

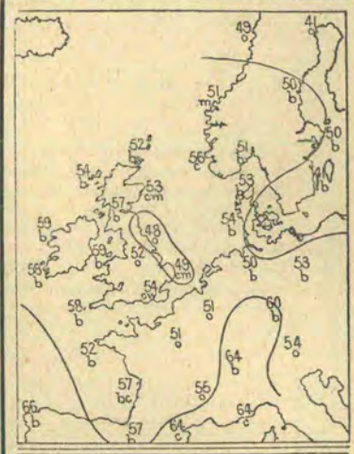
Weather fine generally, but dull over the eastern and central parts of England as well as in South Germany.

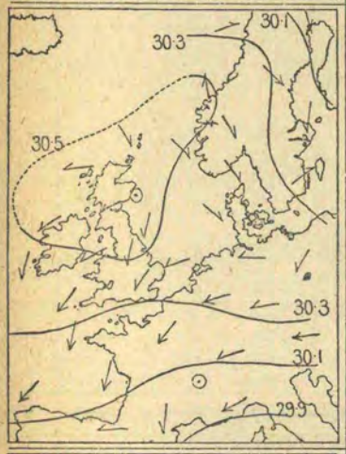
Temperature fallen in most places; readings over over Islands ranging from 59° at Belmullet and Holyhead to 47° at Wick. Subsequently rising to 70° at Parsonstown and 68° at Ardrossan, but thermometer over central England not reaching 60°.

Wind variable in Scandinavia and the north of Scotland, but chiefly North-Easterly elsewhere; light or moderate in force generally.

Sea moderate at Valencia, but slight or smooth elsewhere.

Barometer rising at all but the French and South German stations. Large anticyclone extending from the south of Sweden to the west of Scotland, with relatively low pressures over the southern parts of France and Spain.





Wednesday, May 23.

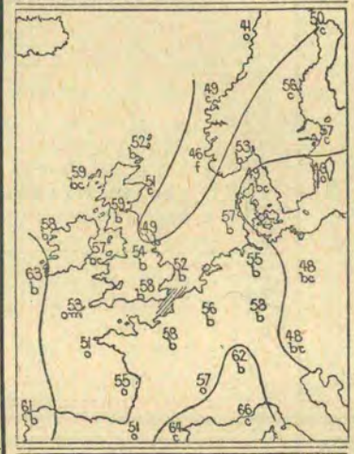
Weather fine generally, but dull in the west of Norway and also in the south of France. Subsequently becoming overcast in the west of France.

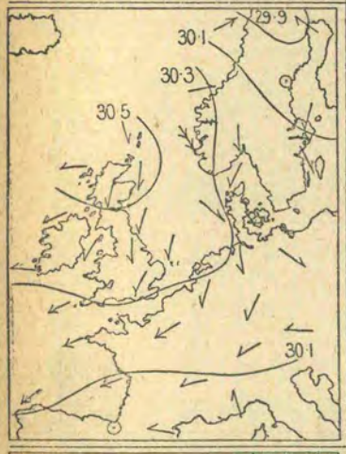
Temperature changed irregularly; readings over our Islands ranging at 8 a.m. from 63° at Valencia to 49° at Shields. Subsequently rising to 71° at York, Liverpool, and Parsonstown, and 70° at Loughborough, Ardrossan, and Cambridge.

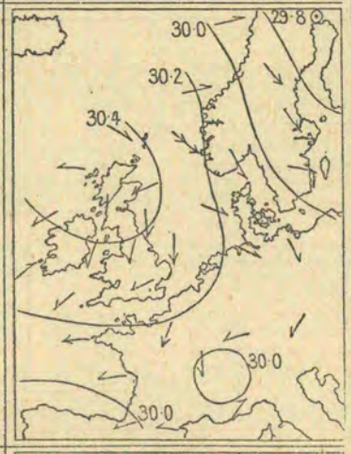
Wind variable in the north of Scotland, and Northerly or North-Westerly in Sweden and Denmark, but North-Easterly elsewhere; light or moderate in force generally, but fresh over the Channel and Bay of Biscay.

Sea moderate in the Channel, but slight or smooth elsewhere.

Barometer rising in our Islands, Germany, and the east of France, but falling elsewhere. Large anticyclone lying over the northern parts of the United Kingdom and the west of Norway, with relatively low pressures over the north of Sweden and the south of Spain.







Thursday, May 24.

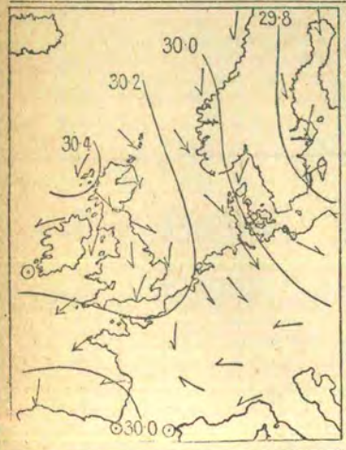
Weather fair generally, but dull over the northern parts of Scotland and Scandinavia, and foggy in Holland and the south of Denmark. Rain falling later at some of the Norwegian and Swedish stations.

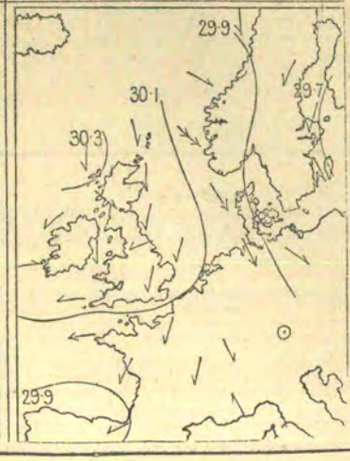
Temperature risen in France and Germany, but changed irregularly elsewhere; readings over our Islands ranging at 8 a.m. from 63° at Valencia to 47° in the extreme north of Scotland. Subsequently rising to 72° at Parsonstown, 71° in London, and 70° at Loughborough, Liverpool, and Cambridge.

Wind South-Westerly in the north-west of Norway, and Northerly over the North Sea and adjacent coasts, but North-Easterly or Easterly elsewhere, fresh or strong in force over the Channel and Bay of Biscay.

Sea moderate in the Channel, but slight or smooth generally.

Barometer rising in Spain, France, and the south of our Islands, but falling in most other localities. Anticyclone lying over Scotland, with a depression over the north of Scandinavia. Depression subsequently moving south-eastwards, but barometer falling generally.





Friday, May 25.

Weather fair or fine generally, but dull in Scandinavia and the north of Scotland.

Temperature risen slightly in Ireland and the west of Scotland, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 66° at Valencia to 44 at Sumburgh Head, Shields, and Oxford. Subsequently rising to 72° at Liverpool and Parsonstown, but maxima over Central England several degrees lower than on previous day.

Wind Northerly or North-Westerly over Scandinavia, Denmark, and the east of Great Britain, but North-Easterly or Easterly at our western, southern, and the French stations; fresh or strong in force over the Channel and Bay of Biscay.

Sea moderate to smooth, except at Cape Griz Nez.

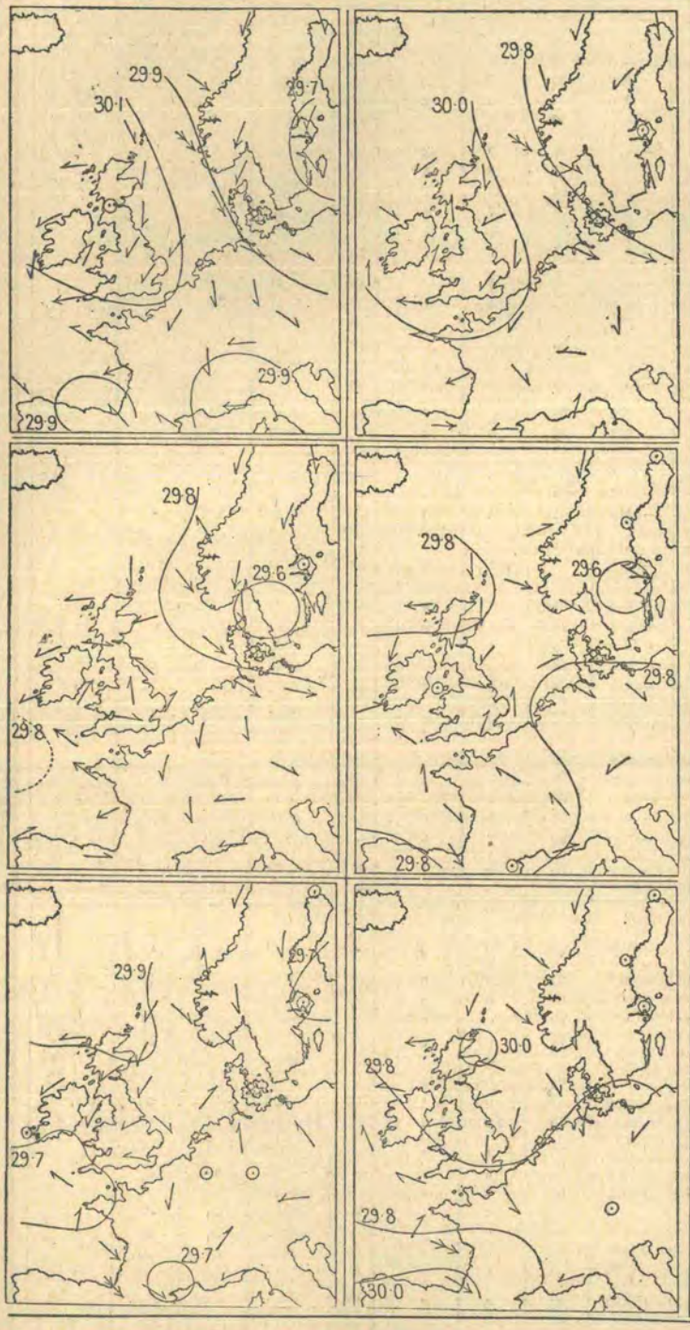
Barometer falling generally. Anticyclone lying off the north-west of Scotland, with low pressures over Sweden and Spain. Fall continuing all day.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, May 26.

Weather fine in France and the west of our Islands, but cloudy or overcast elsewhere; with snow in the north of Scandinavia. Sky clearing later at our eastern and southern stations.

Temperature fallen generally; readings over our Islands ranging at 8 a.m. from 60° at Valencia to 43° in the Shetlands. Subsequently rising above 70° at some of our western stations, but remaining below 60 in the east and south-east.

Wind strong to a gale from the North-Westward on the eastern shores of the North Sea, but light Northerly on the east coasts of Great Britain, and moderate North-Easterly or Easterly at our western, southern, and the French stations.

Sea moderate to smooth, except at Skudesnaes.

Barometer falling generally. Pressure highest off the north-west of Scotland, with areas of low readings over the Baltic, the south of France, and the north of Spain. Fall continuing all day.

Sunday, May 27.

Weather dull and rainy over the northern parts of Scotland, Ireland, and Germany, but fair or fine elsewhere. Fine weather subsequently becoming general, but very heavy local showers experienced in the west of Ireland.

Temperature risen a few degrees in England and the north of France, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 60° at Valencia to 42° at Sumburgh Head, Stornoway, and Nairn. Subsequently rising above 65° over the central parts of England and Ireland, but frost experienced in the north of Scotland at night.

Wind fresh North-Westerly on the eastern shores of the North Sea and South-Easterly on our south-west coasts, but variable over Central England.

Sea rather rough at Stornoway, but moderate to smooth elsewhere.

Barometer falling generally. Large area of high pressure lying over Germany, the north of France, and the south-east of England, and similar systems off the north of our Islands and over Spain, but depression reported over the south of Sweden. Low pressure system appearing later off our extreme south-west coasts.

Monday, May 28.

Weather fine over the Netherlands, Germany, and the east of our Islands, but cloudy elsewhere, with rain at our south-western and extreme northern stations, and thunderstorms in the south of France.

Temperature risen over France, Germany, and the north of Scotland, but fallen elsewhere; readings over our Islands ranging at 8 a.m. from 54° at Valencia and Oxford to 42° at Nairn. Maxima below 60° at all but our extreme south-western stations.

Wind moderate North-Easterly in our Islands, but strong from West or North-West in the west of France, and variable on the eastern shores of the North Sea.

Sea slight or smooth generally.

Barometer falling a little over England, the Netherlands, and Germany, but rising elsewhere. Pressure highest in Portugal, but high to the northward of our Islands, with shallow areas of low readings over the Baltic and our extreme south-west coasts. Rise taking place generally later.

Synoptic Charts.

TEMPERATURE AND WEATHER at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°	°	Inches.	Inches.		
Week ending May 21	Scarborough	—	—	—	—	—	—	—	—	—	—	—	34	30

III.—DATA from which the SUMMARY on page 81 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ‡	58	34	49·6	37·7	43·3	− 4·4	27	12	3	0·33	−0·07	*	*
	Stornoway ‡	63	33	53·4	40·3	46·5	− 2·1	39	5	2	0·13	−0·47	65	55
	Wick ‡	57	30	51·9	39·6	45·4	− 2·8	34	7	6	0·23	−0·15	*	*
	Lairg ‡	72	27	57·7	35·1	45·7	− 2·0	55	19	2	0·20	?−0·30	*	*
	Glencarron ‡	72	36	60·1	39·9	49·4	+ 1·0	61	6	2	0·07†	?	?	?
	Fort Augustus ‡	59	38	53·9	41·3	47·2	− 3·3	39	2	1	0·01†	?	*	*
1. SCOTLAND, E.	Nairn ‡	59	34	54·1	38·9	46·0	− 4·4	41	9	3	0·09	−0·31	*	*
	Aberdeen ‡	60	30	53·9	39·0	46·0	− 3·4	41	8	1	0·02	−0·40	46	39
	Braemar ‡	69	30	60·9	35·4	47·4	− 0·2	66	18	1	0·13	−0·43	72‡	62‡
	Ochtertyre ‡	71	32	63·6	39·4	50·8	+ 0·3	73	7	1	0·04	−0·49	*	*
	Leith ‡	61	38	56·3	41·6	48·5	− 3·1	47	1	1	0·06	−0·33	*	*
	Marchmont ‡	65	34	55·3	39·6	47·0	− 2·5	45	7	1	0·03	−0·55	45	39
2. ENGLAND, N.E.	Alnwick Castle	56	36	50·7	41·7	45·9	− 4·2	29	1	1	0·19	−0·29	*	*
	Durham	64	38	56·1	40·7	47·9	− 3·5	47	4	1	0·07	−0·41	36	31
	Shields	55	41	51·4	42·6	46·7	− 3·9	33	0	1	0·03	−0·37	*	*
	Scarborough ℛ	66	38	52·4	41·6	46·7	− 4·8	35	1	1	0·02	−0·40	50‡	44‡
	York	71	33	61·7	40·9	50·7	− 2·5	66	3	0	—	−0·40	54	47
	Spurn Head	64	42	53·3	43·6	48·2	− 4·0	43	0	1	0·03	?	*	*
3. ENGLAND, E.	Hillington ℛ	67	31	57·6	40·6	48·6	− 3·5	52	4	1	0·01	−0·41	46	41
	Yarmouth	56	41	52·4	44·0	48·0	− 5·7	42	0	0	—	−0·42	*	*
	Geldeston	61	36	56·3	41·7	48·6	− 5·0	47	1	0	—	−0·40	51	46
	Cambridge	70	37	62·4	40·0	50·5	− 2·9	68	6	0	—	−0·42	43	39
	Rothamsted	66	38	59·8	40·4	49·5	− 4·7	59	4	0	—	−0·48	*	*
	Ingatestone	68	34	60·4	40·4	49·8	− 4·3	61	4	0	—	−0·40	47‡	42‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	71	37	63·4	39·6	50·8	− 2·6	72	7	0	—	−0·45	49‡	43‡
	Loughborough	70	38	63·4	41·6	51·9	− 2·0	71	1	1	0·02	−0·43	*	*
	Leicester													
	Cheadle ℛ	67	37	61·3	41·0	50·5	− 2·0	64	3	0	—	−0·53	*	*
	Churchstoke ℛ	67	35	63·6	38·2	50·1	− 2·3	73	11	0	—	−0·43	68	60
	Hereford ℛ	69	40	65·7	41·8	53·0	− 0·9	78	1	0	—	−0·45	*	*
	Cirencester	66	37	61·0	40·3	50·0	− 3·6	63	5	0	—	−0·48	62	56
	Oxford	68	39	61·3	42·1	51·1	− 2·7	64	0	1	0·01	−0·41	57	51
5. ENGLAND, S.	London	71	37	63·4	42·7	52·4	− 2·7	73	0	0	—	−0·42	49‡	45‡
	Strathfield Turgiss ℛ	71	36	65·5	40·1	52·6	− 1·2	78	5	1	0·02	−0·36	*	*
	Dungeness	59	41	55·6	45·0	50·0	− 4·0	56	0	1	0·04	−0·36	*	*
	Hastings (St. Leonard's)	63	41	58·7	44·4	51·1	− 3·4	64	0	1	0·05	−0·35	61	55
	Southampton	72	40	66·2	43·4	54·1	− 0·3	85	0	1	0·03	−0·42	71	65
	Hurst Castle	65	41	62·0	45·0	53·0	− 0·9	77	0	0	—	−0·39	*	*
	Stowell ℛ	68	39	62·9	41·3	51·5	− 0·9	69	2	0	—	?	52‡	47‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	70	41	59·8	45·1	52·0	+ 2·1	70	0	1	0·01†	−0·90	*	*
	Glasgow	70	41	62·9	44·1	52·9	+ 2·6	76	0	0	—	−0·55	60	52
	Ardrossan	70	41	62·7	44·1	52·8	+ 2·0	76	0	0	—	−0·51	*	*
	Glenlee ‡	74	34	66·9	38·9	52·4	+ 1·9	86	9	0	—	?	*	*
	Douglas (Isle of Man)	71	39	61·7	43·3	52·0	+ 1·2	70	0	0	—	−0·43	73	64
7. ENGLAND, N.W.	Newton Reigny (Penrith)	70	32	61·6	37·4	48·8	− 1·5	67	13	0	—	−0·44	66	57
	Barrow-in-Furness	68	44	61·7	47·3	54·1	+ 1·5	85	0	0	—	−0·42	*	*
	Stonyhurst	70	38	62·4	43·3	52·3	− 0·4	72	0	0	—	−0·62	61	54
	Blackpool ℛ	67	41	61·3	43·8	52·0	− 1·6	70	0	0	—	−0·44	65	57
	Manchester	70	39	62·2	44·2	52·7	− 0·7	75	0	0	—	−0·54	*	*
	Liverpool Obsy (Bidston)	72	42	65·6	45·7	55·1	+ 1·6	92	0	0	—	−0·41	*	*
	Llandudno ℛ	63	43	59·6	44·6	51·7	− 2·0	68	0	1	0·04	−0·36	65	58
	Holyhead	62	46	57·9	47·6	52·4	− 0·4	73	0	1	0·05	−0·36	*	*
8. ENGLAND, S.W.	Llandovery	72	35	60·6	41·6	55·1	+ 2·0	93	1	0	—	−0·63	*	*
	Pembroke	68	46	60·1	47·1	53·2	+ 0·3	78	0	0	—	−0·45	80	72
	Arlington (N. Devon)	68	41	63·9	44·3	53·5	+ 0·3	81	0	0	—	−0·71	*	*
	Cullompton ℛ	71	35	64·5	41·9	52·5	− 1·9	74	0	0	—	−0·49	74	67
	Falmouth	65	47	59·4	48·8	53·8	+ 0·1	83	0	1	0·06	−0·55	76	70
	Plymouth	74	44	65·8	49·5	57·2	+ 2·6	106	0	1	0·06	−0·41	85	78
	Prawle Point	65	42	57·6	45·0	50·6	− 2·2	60	0	1	0·02	?	*	*
9. IRELAND, N.	Malin Head	59	44	54·7	47·3	50·8	+ 0·3	62	0	1	0·02	?	*	*
	Londonderry	74	40	68·4	45·0	56·0	+ 4·2	98	0	1	0·04	−0·50	*	*
	Mullaghmore	69	44	63·6	47·7	55·2	+ 2·0	92	0	1	0·01	−0·56	*	*
	Belmullet	67	45	60·9	48·4	54·3	+ 2·5	86	0	1	0·13	?	*	*
	Markree Castle	73	38	64·8	41·6	52·5	− 0·4	75	1	1	0·09	−0·39	72	63
	Brookeborough	73	37	67·9	41·3	53·8	+ 1·2	86	2	0	—	?	*	*
	Armagh	70	39	64·5	42·3	52·7	+ 0·4	75	0	1	0·01	−0·44	73	64
	Donaghadee	68	40	60·3	48·6	54·1	+ 2·6	85	0	0	—	−0·48	*	*
	Edgeworthstown	72	40	66·1	44·0	54·4	+ 2·7	87	0	1	0·10	−0·43	*	*
10. IRELAND, S.	Dublin	65	44	62·6	47·4	54·5	+ 1·6	88	0	0	—	−0·43	78	69
	Parsonstown	72	41	69·1	44·4	56·0	+ 3·0	98	0	1	0·09	−0·42	74	65
	Kilkenny	72	39	68·6	42·9	55·3	+ 2·6	93	0	0	—	−0·44	*	*
	Waterford	71	38	66·4	44·5	54·8	+ 0·5	90	0	0	—	−0·52	*	*
	Roche's Point	66	44	61·1	47·6	54·0	− 0·4	84	0	2	0·13	−0·57	*	*
	Valencia	69	43	66·9	47·1	56·4	+ 3·3	101	0	1	0·18	−0·50	84	76
	Killarney	72	39	69·0	41·0	54·2	+ 1·5	90	3	1	0·06	?	*	*
	Foynes	73	48	69·0	49·3	58·6	+ 5·9	116	0	1	0·04	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	60	47	57·3	49·0	52·9	− 1·3	76	0	1	0·16	−0·23	*	*
	Jersey (Noirmont)	66	42	61·0	47·6	54·0	− 0·9	84	0	2	0·10	−0·30	76	70

Stations marked ℛ are in connection with the Royal Meteorological Society, and those marked ‡ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

(OFFICIAL COPY.)

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 22.] *Second Series.* WEEK ENDING MONDAY, 4TH JUNE, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 88.)	Observed during the Week. Highest.	Observed during the Week. Lowest.	Averages of Daily Maxima.	Averages of Daily Minima.	Averages of Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	For the Week. Difference from Mean.	For the Week. Below 42°	For the Week. Difference from Mean.	From January 3, 1888. Above 42°.	From January 3, 1888. Difference from Mean.	From January 3, 1888. Below 42°.	From January 3, 1888. Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
	0. SCOTLAND, NORTH	57	29	48·8	37·5	42·8	7 below.	25	−23	13	+10	294	− 83	710	+202
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	61	27	51·8	38·2	44·5	7 below.	33	−34	11	+ 8	394	−134	700	+157
	2. ENGLAND, N.E.	70	37	57·3	43·4	49·9	3 below.	55	−16	0	− 2	411	−130	555	+ 73
	3. ENGLAND, EAST	84	39	67·5	46·5	56·3	2 above.	100	+16	0	− 1	546	−146	661	+154
	4. MIDLAND COUNTIES	75	38	63·5	46·6	54·5	0 (average).	88	+ 4	0	− 2	549	−175	654	+150
	5. ENGLAND, SOUTH	82	42	65·0	48·7	56·3	1 above.	100	+10	0	0	549	−227	577	+204
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	61	38	53·1	42·7	47·6	5 below.	39	−32	0	− 1	435	−145	505	+107
	7. ENGLAND, N.W.	66	35	56·6	45·7	50·8	4 below.	62	−14	0	− 1	445	−161	500	+117
	8. ENGLAND, S.W.	79	40	61·9	48·4	54·7	0 (average).	89	+ 6	0	0	534	−242	487	+254
	9. IRELAND NORTH	64	40	54·8	45·1	49·6	4 below.	53	−19	0	− 1	505	−153	417	+ 67
	10. IRELAND, SOUTH	70	38	60·5	49·1	54·4	0 (average).	87	+ 8	0	0	651	−160	352	+113
	— CHANNEL ISLANDS	75	46	61·5	51·1	56·0	0 (average).	98	+11	0	0	653	−206	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 88.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
	0. SCOTLAND, NORTH	6	15	10 more.	109	+12	17·4	−1·0	35	29	504	− 40	27	− 3
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	5	17	13 more.	90	+13	11·8	+0·3	29	25	541	− 77	29	− 5
	2. ENGLAND, N.E.	4	9	4 more.	78	+ 2	9·0	−0·9	33	28	503	− 45	27	− 3
	3. ENGLAND, EAST	2	2	2 less.	75	− 3	7·6	−1·8	50	44	535	−128	29	− 7
	4. MIDLAND COUNTIES	2	4	1 less.	67	− 8	7·3	−3·4	38	34	495	− 92	27	− 5
	5. ENGLAND, SOUTH	1	2	2 less.	69	− 3	8·7	−2·0	55	49	516	− 99	28	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	6	21	13 more.	77	−10	16·5	−1·1	25	22	576	+ 4	31	0
	7. ENGLAND, N.W.	5	7	2 more.	79	+ 1	8·1	−4·4	23	20	518	− 57	28	− 3
	8. ENGLAND, S.W.	3	4	2 less.	76	− 7	10·8	−6·0	41	37	633	− 30	34	− 2
	9. IRELAND, NORTH	5	12	6 more.	83	−11	11·9	−1·6	24	21	506	− 83	27	− 5
	10. IRELAND, SOUTH	5	11	5 more.	74	−15	13·2	−3·0	25	22	604	− 47	33	− 3
	— CHANNEL ISLANDS	4	8	4 more.	94	+ 4	11·1	−1·8	56	51	700	− 95	38	− 6

General Remarks.

Weather has varied greatly in different parts of the Kingdom. Over the greater part of England it has been generally fine and at times warm, but over Ireland, Scotland, and the northern districts of England the conditions have been cold and dull, and some heavy falls of rain have occurred. During the latter part of the period a great deal of snow fell in some parts of Scotland.

Temperature has been 4° below the mean in "Ireland, N." and "England, N.W.", and 3° in "England, E.", while in Scotland it was from 5° to 7° below; in the other districts, however, it has either equalled or been slightly above its normal value for the time of year. The highest of the maxima (which were generally recorded on June 3rd over England and on various dates in Ireland and Scotland) ranged from 57° to 61° in Scotland, from 64° to 70° in Ireland, and from 66° to 84° over England. The maxima over Scotland on June 2nd and 3rd were extremely low, at some stations the thermometer on the 3rd did not exceed 38°. The lowest of the minima (registered on somewhat irregular dates) ranged from 35° to 42° over England, Ireland, and the west of Scotland, but in the north and east of Scotland they were as low as from 27° to 29°.

Rainfall has been considerably more than the mean in the Irish and Scotch districts, and rather more over the north of England, but less over southern, central, and south-eastern England.

Bright sunshine shows a general decrease, especially in the west and north. The percentage of the possible amount of duration ranged from 20 in "England, N.W." to 44 in "England, E.", 49 in "Ireland, S.", and 51 in the "Channel Islands".

Depressions observed.—The distribution of barometric pressure has varied considerably. At the commencement of the week depressions moving northwards were skirting our western coasts, while an area of high readings lay over the North Sea, and another over Spain. The former high-pressure area soon dispersed and a depression of some importance moved slowly in an east-north-easterly direction over our northern coasts to Scandinavia. The southern high-pressure area in the mean time moved northwards and formed a long anticyclonic band, which travelled north-eastwards and passed away to the Baltic on the 8th. A new depression then appeared in the north, and travelling eastwards reached the south of Sweden next day, after which the barometer rose in the north. The winds have varied a good deal both in direction and force, on the 30th and 31st May a South-Westerly to Westerly gale was experienced over the United Kingdom, and on 3rd June a moderate Easterly gale prevailed in the north of Scotland.

A 54511. 350.—6/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

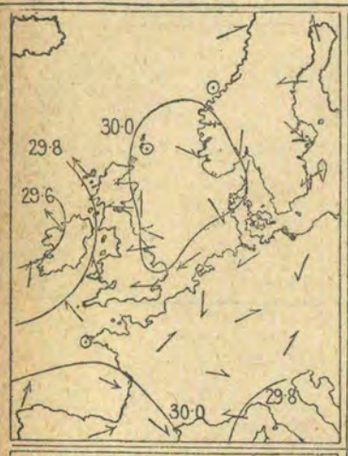
Weather

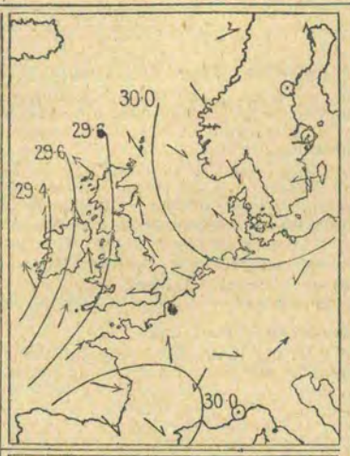
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, May 29.

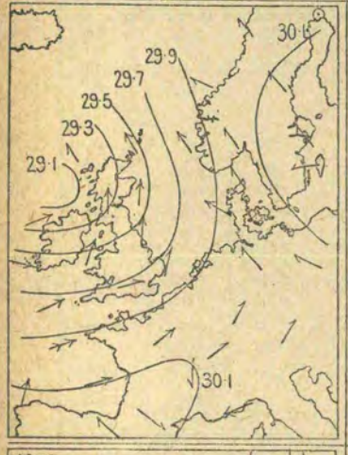
Weather becoming less settled than of late; rainy in the west at 8 a.m., and overcast in most other places. Subsequently becoming showery in all parts of the Kingdom, the fall being very heavy in the north-west.

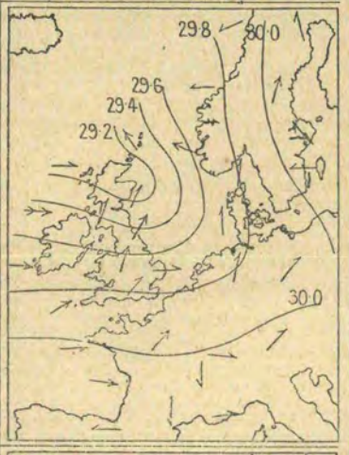
Temperature changing irregularly; rising in north, but daily maxima exceeding 60° at the southern and midland stations only.

Wind moderate Easterly over Great Britain, Southerly and South-Easterly in Ireland, and blowing strongly in places; Westerly strong over the Bay of Biscay; subsequently veering a little in the south-west, and increasing still further in force.

Sea rough, and rising in south-west.

Barometer falling generally. Pressure highest in Spain; secondary anticyclone over North Sea moving eastwards, and a depression approaching Ireland from the Atlantic.





Wednesday, May 30.

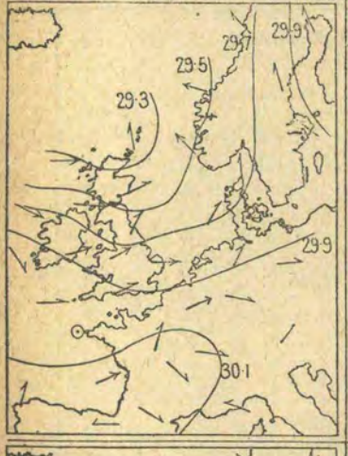
Weather squally and showery generally at first; afterwards improving in the south and east, with some increase of warmth.

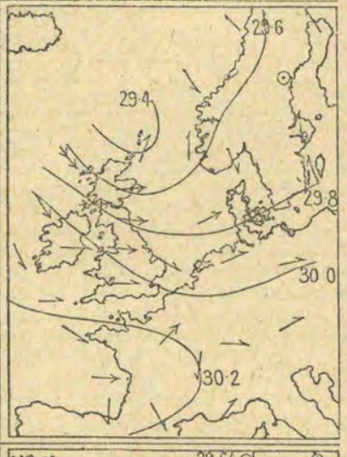
Temperature inclined to rise; daily maxima high over Germany and in south of France, but very little above 60° over England.

Wind Southerly in the north, Westerly elsewhere; blowing hard at several western and north-wsetern stations, and a stiff squally breeze elsewhere.

Sea rough except in the south-east and east.

Barometer falling north, rising south. Well-marked depression in north-west moving north-eastwards; high pressure area over Spain spreading northwards.





Thursday, May 31.

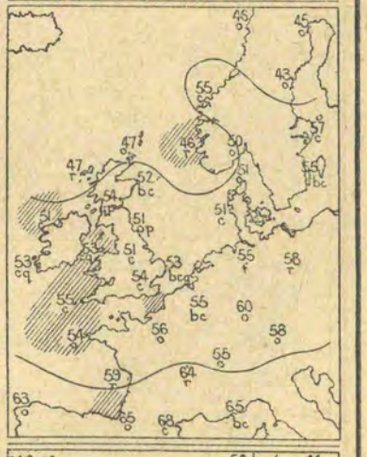
Weather improving, still squally or gusty in most places, with a good deal of cloud, but no rainfall in south and east, and very little elsewhere, except at some extreme north-western and northern stations.

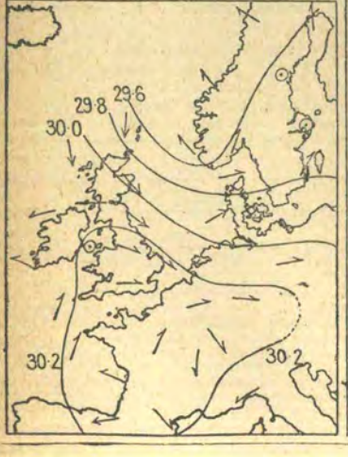
Temperature decreasing, decidedly low in early morning, and not rising to 60° or more during the day except in the east and south.

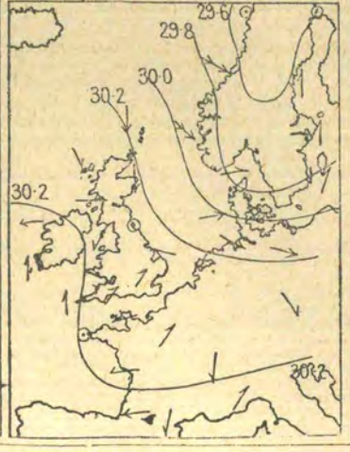
Wind Westerly, fresh to strong, veering to North-West on our north-western coasts, and blowing a gale at some exposed stations.

Sea rough in west and north-west, but moderating later.

Barometer rising decidedly; depression in north passing away, and high pressure area in far South moving northwards, and spreading considerably.







Friday, June 1.

Weather showery in west and south-west, cloudy to clear elsewhere, and, after a cold night, becoming warmer over England.

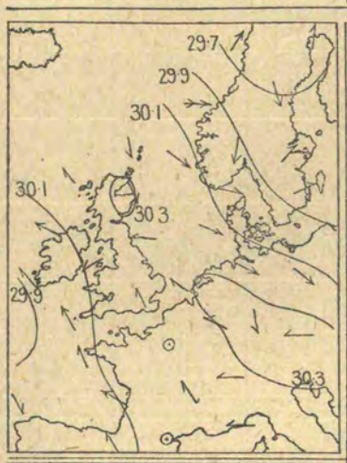
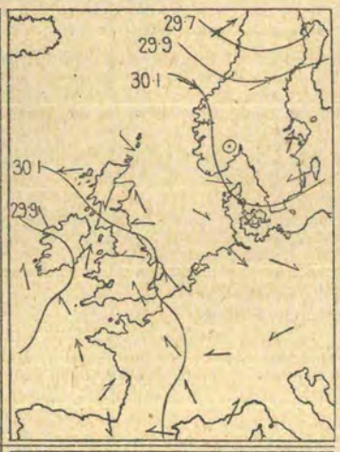
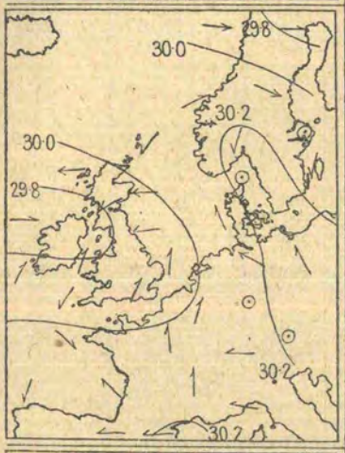
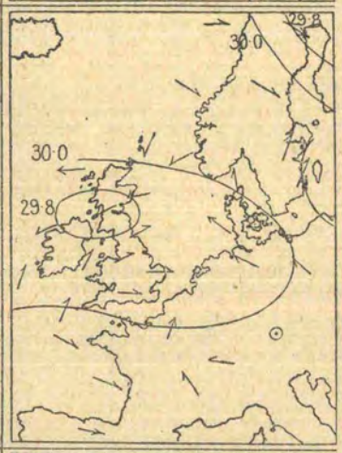
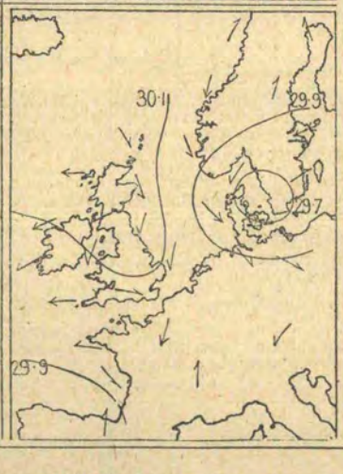
Temperature inclined to increase; daily maxima as high as 65° to 69° in the south and south-east of England, and rising to upwards of 90° in some parts of Spain.

Wind North-Westerly in the north, Westerly in the east, and rather strong in force; backing to between East and South in the west, and freshening. The South-Easterly current spreading northwards and eastwards later.

Sea very little disturbed, except in the north.

Barometer highest over the British Islands and France, low, but rising, over Scandinavia, falling over Bay of Biscay and Spain. Depression over Atlantic approaching the south-west of Ireland.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Saturday, June 2.** *Weather* becoming very unseasonable in north, with much cold rain and snow in places; becoming much warmer than of late in the south, with fine weather—rainy in north-west. *Temperature* very low in north where maxima were below 40° in places; rising to between 75° and 78° over our southern counties, to 82° in Paris, and to 97° at Biarritz. North-Westerly winds prevalent over Scandinavia. *Wind* Easterly in the north, South-Easterly to Southerly elsewhere; light in the east and south, freshening in the north as day advanced. *Sea* rather rough in north only. *Barometer* falling west and south-west, rising north and east; depression in west extending eastwards in form of a hollow.	
		**Sunday, June 3.** *Weather* still extremely unseasonable in Scotland, with much cold rain and snow; very fine and warm in south, with much cirriform cloud about. *Temperature* very low in north (maxima 38° to 40° in places, and minima below freezing point), high in south, maxima 80° to 83° over our south-eastern counties and 90° to 94° over France. *Wind* fresh to strong from the Eastward in Scotland, moderate Southerly in the east of England, South-Westerly to Westerly on our south-western coasts and in Brittany. *Sea* still rough in the north; slight elsewhere. *Barometer* falling decidedly except over Scandinavia; change greatest in north-west. Depression over our north-western districts moving eastwards.	
		**Monday, June 4.** *Weather* improving in north, with some recovery of warmth; becoming less fair in south. Much rain in west and south-west later. *Temperature* giving way over England, where the daily maxima did not exceed 70° to 75°. Inclined to rise in Scotland. Considerable fall over England later. *Wind* becoming very variable and light over the southern parts of the Kingdom. Easterly wind in north dying down and backing towards north. *Sea* very little disturbed. *Barometer* rising again, most in north, as the depression in north-east passed off. Fresh fall in the south-west later owing to a new disturbance approaching from Spain and Bay of Biscay.	

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 85 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ℳ	52	33	47·6	38·1	42·5	− 6·3	20	11	5	0·42	0·00	*	*
	Stornoway ℳ	51	31	48·3	38·4	43·0	− 6·7	22	10	5	1·83	+1·21	35	29
	Wick ℳ	53	29	50·6	38·1	43·9	− 5·8	30	11	6	1·34	+0·95	*	*
	Lairg ℳ	56	29	48·4	34·6	41·0	− 8·0	18	27	7	2·28	+1·78	*	*
	Glencarron ℳ	52	33	46·8	36·6	41·4	− 8·4	13	20	6	2·07†	?	?	?
	Fort Augustus ℳ	57	33	51·2	39·3	44·8	− 7·5	31	8	5	0·80†	?	*	*
1. SCOTLAND, E.	Nairn ℳ	58	30	51·9	37·0	43·9	− 8·3	34	14	7	0·93	+0·53	*	*
	Aberdeen ℳ	61	31	52·1	39·3	45·3	− 5·8	34	8	6	2·30	+1·88	39	33
	Braemar ℳ	52	27	47·9	34·7	40·8	− 8·6	17	26	4	2·58	+2·05	12‡	10‡
	Ochtertyre ℳ	60	29	53·3	38·4	45·3	− 6·9	38	10	5	2·62	+2·09	*	*
	Leith ℳ	61	34	53·6	40·9	46·9	− 5·9	39	3	4	0·91	+0·51	*	*
	Marchmont ℳ	57	31	52·0	38·6	44·8	− 6·4	34	10	5	1·09	+0·55	36	31
2. ENGLAND, N.E.	Alnwick Castle ℳ	60	40	53·1	42·4	47·4	− 4·2	38	0	6	1·62	+1·14	*	*
	Durham ℳ	67	37	58·1	41·2	49·1	− 3·9	53	2	5	0·68	+0·20	37	32
	Shields ℳ	63	40	56·0	42·1	48·6	− 3·3	46	0	5	0·96	+0·56	*	*
	Scarborough ℳ	69	40	58·2	43·3	50·2	− 2·5	57	0	4	0·89	+0·45	28‡	24‡
	York ℳ	70	39	60·0	44·9	51·9	− 2·5	69	0	3	0·59	+0·14	33	29
	Spurn Head ℳ	66	43	58·6	46·4	52·1	− 1·4	71	0	3	0·37	?	*	*
3. ENGLAND, E.	Hillington ℳ	80	43	68·2	46·6	56·7	+ 3·3	103	0	1	0·25	−0·21	48	42
	Yarmouth ℳ	81	42	63·4	47·0	54·6	+ 0·6	88	0	2	0·15	−0·29	*	*
	Geldeston ℳ	84	41	67·2	46·1	55·9	+ 1·0	97	0	1	0·15	−0·25	57	50
	Cambridge ℳ	83	42	70·9	46·4	58·2	+ 3·5	113	0	2	0·30	−0·18	47	42
	Rothamsted ℳ	81	43	67·6	46·8	56·5	+ 0·6	102	0	2	0·26	−0·24	*	*
	Ingatestone ℳ	81	39	67·6	46·1	56·1	+ 0·4	99	0	1	0·23	−0·20	46‡	41‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall) ℳ	71	40	61·7	46·3	53·5	− 1·4	81	0	3	0·56	+0·06	27‡	24‡
	Loughborough ℳ	75	42	65·9	47·0	55·8	0·0	97	0	1	0·27	−0·22	*	*
	Leicester ℳ													
	Cheadle ℳ	65	38	58·9	44·1	51·0	− 2·9	63	0	3	0·47	−0·13	*	*
	Churchstoke ℳ	68	38	61·0	45·6	52·8	− 1·1	76	0	3	0·37	−0·09	32	28
	Hereford ℳ	74	43	66·8	47·9	56·7	+ 1·3	103	0	2	0·26	−0·22	*	*
	Cirencester ℳ	73	41	64·0	46·7	54·8	− 0·3	90	0	2	0·43	−0·07	45	40
	Oxford ℳ	74	44	66·3	48·6	56·7	+ 1·3	103	0	1	0·27	−0·18	47	42
5. ENGLAND, S.	London ℳ	82	46	70·6	49·0	59·1	+ 2·2	120	0	1	0·20	−0·24	47‡	42‡
	Strathfield Turgiss ℳ	80	44	71·2	47·4	58·5	+ 4·0	116	0	1	0·22	−0·18	*	*
	Dungeness ℳ	63	42	58·7	48·4	53·2	− 2·4	78	0	1	0·06	−0·34	*	*
	Hastings (St. Leonard's) ℳ	71	45	60·7	48·6	54·2	− 1·5	85	0	2	0·03	−0·37	64	57
	Southampton ℳ	73	46	66·7	49·4	57·5	+ 0·8	109	0	1	0·28	−0·17	62	55
	Hurst Castle ℳ	73	48	62·7	51·0	56·4	+ 0·9	101	0	2	0·25	−0·16	*	*
	Stowell ℳ	72	43	64·2	47·2	55·1	+ 1·2	92	0	2	0·23	?	47‡	42‡
6. SCOTLAND, W.	Laudale (Loch Sunart) ℳ	56	40	50·2	41·6	45·6	− 5·6	27	1	5	2·51†	+1·50	*	*
	Glasgow ℳ	59	38	54·1	41·7	47·5	− 4·5	40	1	6	1·79	+1·20	22	19
	Ardrossan ℳ	57	39	51·4	41·3	46·0	− 6·7	31	2	6	2·73	+2·21	*	*
	Glenlee ℳ	59	39	54·1	42·6	48·0	− 4·1	42	0	6	2·55	?	*	*
	Douglas (Isle of Man) ℳ	61	42	55·6	46·5	50·7	− 2·0	61	0	5	1·03	+0·56	28	24
7. ENGLAND, N.W.	Newton Reigny (Penrith) ℳ	63	35	54·7	41·8	47·8	− 4·4	41	1	5	1·16	+0·70	29	25
	Barrow-in-Furness ℳ	58	42	55·4	46·0	50·4	− 3·8	59	0	6	0·82	+0·36	*	*
	Stonyhurst ℳ	62	40	55·9	44·7	49·9	− 4·1	55	0	5	0·80	+0·11	21	18
	Blackpool ℳ	62	41	55·2	45·5	50·0	− 5·1	56	0	4	0·60	+0·12	21	18
	Manchester ℳ	65	39	57·8	44·6	50·7	− 4·2	61	0	6	0·96	+0·35	*	*
	Liverpool Obsy (Bidston) ℳ	66	43	58·7	47·1	52·5	− 2·5	74	0	5	0·40	−0·02	*	*
	Llandudno ℳ	66	44	58·7	47·5	52·7	− 2·7	75	0	5	0·54	+0·14	22	19
	Holyhead ℳ	63	46	56·6	48·0	52·1	− 2·1	71	0	5	0·57	+0·13	*	*
8. ENGLAND, S.W.	Llandovery ℳ	79	40	65·9	47·9	56·3	+ 1·7	100	0	4	0·54	−0·11	*	*
	Pembroke ℳ	66	45	56·1	48·0	51·8	− 2·9	69	0	3	0·32	−0·14	37	33
	Arlington (N. Devon) ℳ	71	45	61·7	47·6	54·2	− 0·5	85	0	3	0·33	−0·46	*	*
	Cullompton ℳ	72	43	65·2	46·2	55·0	− 0·7	91	0	2	0·29	−0·23	42	38
	Falmouth ℳ	63	47	60·2	50·6	55·1	− 0·1	92	0	2	0·71	+0·06	43	39
	Plymouth ℳ	77	48	65·7	51·3	58·0	+ 2·2	112	0	2	0·38	−0·10	43	39
	Prawle Point ℳ	66	45	58·4	46·9	52·3	− 1·9	72	0	2	0·40	?	*	*
9. IRELAND, N.	Malin Head ℳ	56	40	50·7	43·4	46·8	− 5·4	34	0	6	1·41	?	*	*
	Londonderry ℳ	59	41	54·4	44·2	48·9	− 5·5	48	0	6	1·14	+0·59	*	*
	Mullaghmore ℳ	57	43	54·7	44·9	49·5	− 5·2	53	0	5	0·73	+0·05	*	*
	Belmullet ℳ	59	44	54·0	47·3	50·4	− 2·7	59	0	4	0·80	?	*	*
	Markree Castle ℳ	60	40	56·1	44·9	50·1	− 4·4	57	0	4	0·72	+0·17	25	22
	Brookeborough ℳ	59	43	54·8	45·6	49·9	− 4·5	55	0	5	1·39	?	*	*
	Armagh ℳ	64	41	56·2	44·9	50·2	− 3·9	57	0	4	1·31	+0·83	23	20
	Donaghadee ℳ	60	44	55·1	45·6	50·0	− 3·4	56	0	5	2·11	+1·63	*	*
	Edgeworthstown ℳ	63	41	57·3	44·7	50·6	− 2·3	60	0	5	0·89	+0·29	*	*
10. IRELAND, S.	Dublin ℳ	67	45	59·2	48·5	53·5	− 1·0	81	0	7	0·50	+0·06	25	22
	Parsonstown ℳ	68	38	60·6	46·7	53·2	− 1·3	78	0	5	0·91	+0·38	25	22
	Kilkenny ℳ	67	44	60·1	49·3	54·3	0·0	86	0	5	1·71	+1·23	*	*
	Waterford ℳ	70	44	61·4	48·1	54·3	− 1·4	86	0	4	1·08	+0·53	*	*
	Roche's Point ℳ	61	48	58·4	50·3	54·1	− 1·8	85	0	7	2·07	+1·34	*	*
	Valencia ℳ	68	48	60·6	50·1	55·0	+ 0·6	91	0	5	1·01	+0·28	24	21
	Killarney ℳ	69	47	62·7	51·0	56·4	+ 2·1	101	0	2	0·67	?	*	*
	Foynes ℳ	69	45	60·7	48·8	54·3	+ 0·1	86	0	7	0·64	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's) ℳ	63	50	59·1	51·1	54·8	− 0·5	90	0	4	0·89	+0·49	*	*
	Jersey (Noirmont) ℳ	75	46	63·9	51·1	57·1	+ 0·8	106	0	3	0·69	+0·29	56	51

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked $ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

NOTE.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 23.] *Second Series.* WEEK ENDING MONDAY, 11TH JUNE, 1888. [*Price 4d.* [*Annual subscription, post paid,* £1 1s. 2d.

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 92.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	63	28	55·3	41·6	48·0	3 below.	44	− 8	1	0	338	− 82	711	+201
	1. SCOTLAND, EAST	72	26	57·9	42·1	49·4	4 below.	52	−22	0	− 1	446	−143	700	+157
	2. ENGLAND, N.E.	68	36	58·1	46·0	51·6	3 below.	67	−11	0	0	478	−132	555	+ 73
	3. ENGLAND, EAST	74	41	63·3	47·6	54·9	1 below.	90	− 1	0	0	636	−144	661	+154
	4. MIDLAND COUNTIES	71	41	62·0	47·5	54·3	2 below.	86	− 4	0	0	635	−173	654	+150
	5. ENGLAND, SOUTH	71	41	62·0	49·5	55·3	2 below.	93	− 4	0	0	642	−228	577	+204
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	64	33	57·4	45·7	51·1	2 below.	64	−14	0	0	499	−152	505	+107
	7. ENGLAND, N.W.	68	30	59·3	47·0	52·8	3 below.	76	− 7	0	0	521	−162	500	+117
	8. ENGLAND, S.W.	68	38	60·2	49·0	54·2	2 below.	85	− 4	0	0	629 *	−235	487	+254
	9. IRELAND NORTH	67	39	57·6	47·0	51·9	3 below.	69	− 9	0	0	574	−157	417	+ 67
	10. IRELAND, SOUTH	66	40	59·4	49·5	54·1	2 below.	85	0	0	0	736	−157	352	+113
	— CHANNEL ISLANDS	65	41	60·7	51·7	55·9	1 below.	97	+ 4	0	0	750	−198	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 92.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	5	9	4 more.	114	+13	18·3	+0·3	40	33	544	− 47	28	− 2
	1. SCOTLAND, EAST	4	8	3 more.	94	+14	12·6	+0·5	39	32	580	− 76	30	− 4
	2. ENGLAND, N.E.	4	6	2 more.	82	+ 2	9·6	−0·8	31	26	534	− 46	27	− 3
	3. ENGLAND, EAST	3	2	3 less.	78	− 4	7·8	−2·1	35	30	570	−140	29	− 8
	4. MIDLAND COUNTIES	5	10	4 more.	72	− 7	8·3	−2·9	29	25	524	− 97	27	− 5
	5. ENGLAND, SOUTH	5	7	3 more.	74	− 3	9·4	−1·8	29	26	545	−108	28	− 5
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	5	18	7 more.	82	− 8	18·3	−0·2	26	22	602	− 11	31	− 1
	7. ENGLAND, N.W.	5	5	0 (average).	84	+ 2	8·6	−4·4	27	23	545	− 74	28	− 4
	8. ENGLAND, S.W.	5	14	8 more.	81	− 6	12·2	−5·3	22	20	655	− 56	34	− 3
	9. IRELAND, NORTH	6	21	15 more.	89	− 9	14·0	−0·1	13	11	519	−106	26	− 6
	10. IRELAND, SOUTH	6	26	19 more.	80	−14	15·8	−1·0	15	13	619	− 73	32	− 4
	— CHANNEL ISLANDS	6	12	8 more.	100	+ 6	12·3	−1·0	26	23	726	−117	37	− 6

General Remarks.

Weather has been dull and very rainy over all the western and north-western parts of the Kingdom, and generally cloudy, but with less rain, in the east and south-east. In many parts of Great Britain, however, some intervals of clear sky have been experienced. Thunder and lightning prevailed at times in different parts of the country, but were not at all general.

Temperature has been below the mean in all districts, the deficit at the more northern stations being 3° or 4°. During the earlier days of the period the thermometer was very low, the maxima in some places being less than 50°, but as the week advanced the thermometer rose, and on the 11th maxima of 68° to 74° were recorded over Great Britain. The absolute minima (which were registered either on the 5th or 6th) were very low generally. Over the inland parts of Scotland they varied from 26° to 33°, and even in "England, N.W." (at Newton Reigny) temperature fell to 30°. In the other districts the minima ranged from 36° to 48°.

Rainfall has again been less than the mean in "England, E.", but in nearly all other districts an excess is shown. Over Ireland, the west of Scotland, and the south-west of England the fall has been very heavy.

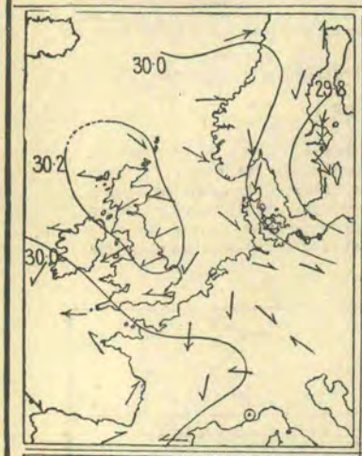
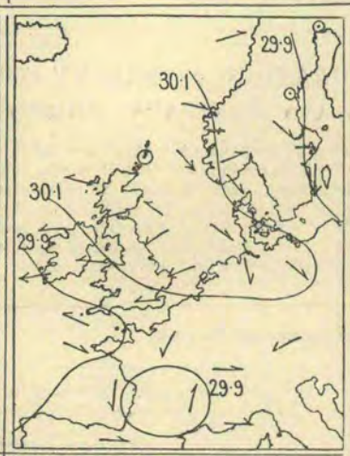
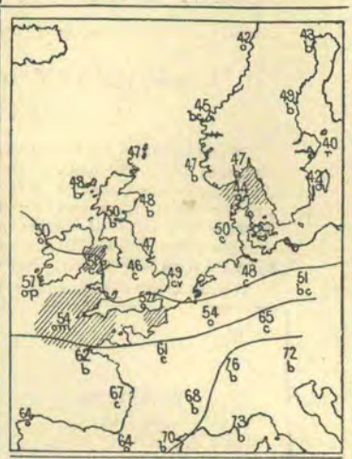
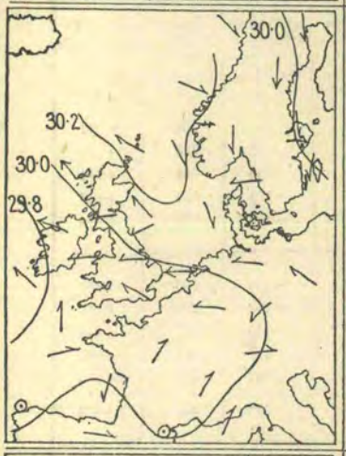
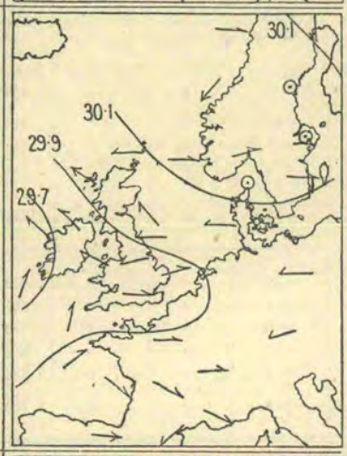
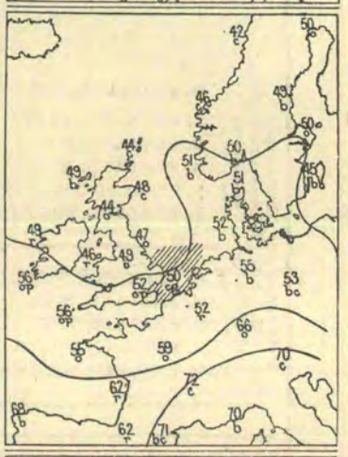
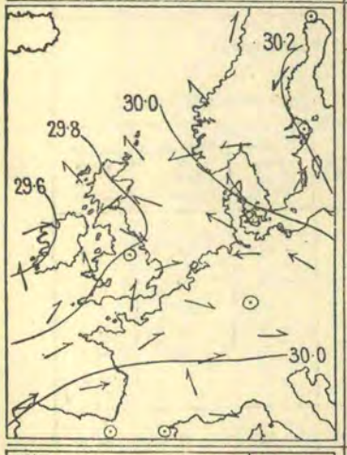
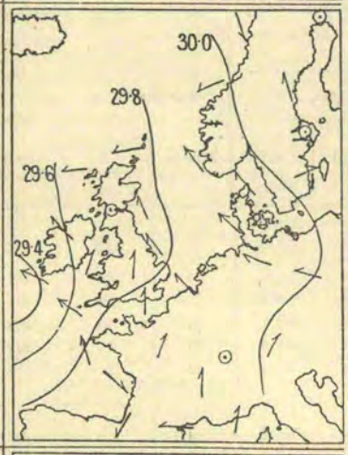
Bright sunshine has been less prevalent than it was last week except in Scotland. The percentage of the possible amount of duration was very low generally; in Ireland it ranged from 11 to 13, in England from 20 to 30, and in Scotland from 22 to 33.

Depressions observed.—Soon after the commencement of the period depressions began to move in a northerly direction outside our western coasts, while some shallow secondary disturbances advanced more directly over us. By the 9th an irregularly shaped low pressure system covered nearly the whole of Great Britain; this travelled north-north-eastwards and at the end of the week lay off the north-west of Norway, but the barometer, after rising briskly, was again falling decidedly on our south-western and western coasts. The wind was at first fresh from between East and South-East, but subsequently veered to South-West or West very generally; at the close of the period, however, it had backed to the Southward at all our western stations.

* The corresponding value for the week ending May 28th should be "455" and that for last week "544."

A 54589. 350.—6/88. Wt. 37. E. & S.

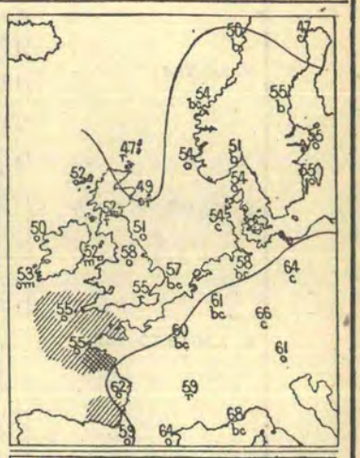
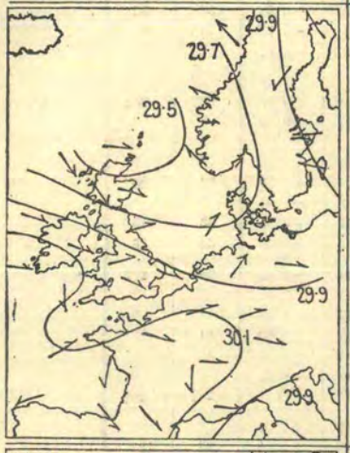
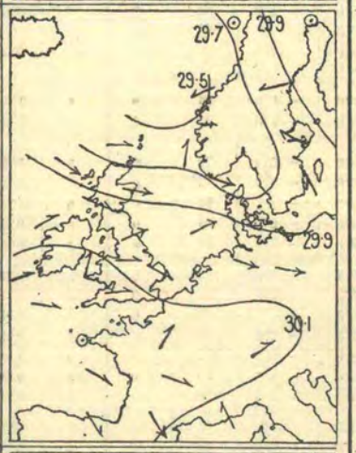
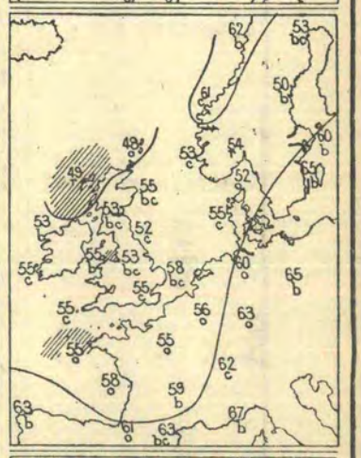
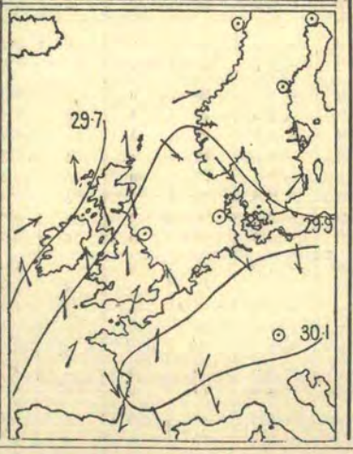
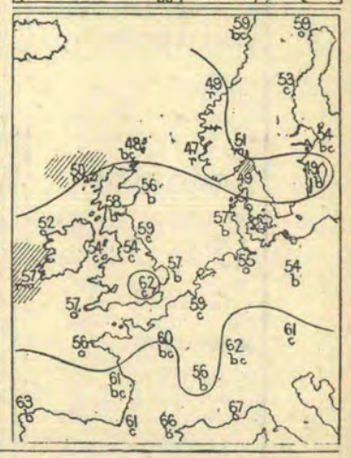
II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, June 5.** *Weather* dull and very rainy at the western, south-western, and some midland stations; dull in the south. Rainfall exceeding an inch at several western stations, and amounting to nearly 1·7 ins. at Parsonstown. Sky clear in north-east and north. *Temperature* risen in the north, fallen fast elsewhere; maxima not exceeding 60° except in the west of England and extreme south-east of England. *Wind* Easterly and North-Easterly on our coasts, light in north, fresh to strong in south and south-west; inclined to veer slightly in south-west later, and shifting to West over Brittany. Strong Northerly wind over Baltic and Sweden. *Sea* rough in south-west and west. *Barometer* falling in south-west, rising in north and north-east. Anticyclone over northern and north-eastern parts of Great Britain moving north-eastwards; depression approaching our south-western coasts and Bay of Biscay.	
		**Wednesday, June 6.** *Weather* becoming more generally showery, but rainfall much less heavy in the west than of late; some thunder and lightning in the south-west at night. *Temperature* not changing much, except over France, where it rose decidedly during day. *Wind* drawing round to the Westward in France, and to South-West over our southern districts during day, but remaining Easterly and South-Easterly at the more northern stations, and blowing strongly locally. *Sea* rather rough in the east, and subsequently in north-east. *Barometer* falling in most places, chiefly in north-west and north. Large shallow depression in far west and small secondary in south both moving northwards. Other shallow subsidiary disturbances appearing over France.	
		**Thursday, June 7.** *Weather* still somewhat unsettled and showery, but with bright intervals; thunder and lightning at times, especially in north-east. *Temperature* rising in south, especially in south-east of England, and reaching 72° at Cambridge, 68° in London, and 67° at Loughborough during day. *Wind* South-Westerly, light over the southern parts of the Kingdom, South-Easterly in the north, and gradually falling light. Subsequently backing southwards in the south-west, and increasing greatly. *Sea* little disturbed at first, afterwards becoming rough in the south-west. *Barometer* little changed at first, subsequently falling decidedly in south-west, as a new depression approached Ireland. Old disturbances travelling northwards and beginning to disperse.	
		Friday, June 8. *Weather* dull, changeable, and showery, especially in the west and north, with fog in some places; continuing unsettled all day. *Temperature* varying fitfully; maxima less high than on 7th. *Wind* mainly Southerly and South-Easterly, and blowing strongly over Bay of Biscay, Brittany, and at mouth of Channel; Northerly light in extreme west of Ireland. The Northerly wind extending to the east of Ireland later. *Sea* rough in south-west, not much disturbed elsewhere. *Barometer* falling except in extreme west, depression over Ireland developing a local minimum near Scilly, and moving eastwards.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.	Weather during the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. TEMPERATURE AND WEATHER at 8 a.m.
		Saturday, June 9. *Weather* cold, changeable, and unsettled ; very showery in the south of England, thunderstorms occurring locally in a few districts—very generally on the Continent. Much fog in the north and north-west. *Temperature* fallen, except locally at Liverpool. *Wind* becoming Northerly and North-Westerly at all western stations ; strong from West in south ; the South-Easterly wind dying out completely. *Sea* rough in Channel and on our south-western coasts. *Barometer* rising in west, and afterwards in south, falling elsewhere. Depression over Great Britain beginning to move northward.	
		**Sunday, June 10.** *Weather* improving over the greater part of our Islands, but rough and showery over Scandinavia and the north of Scotland ; some thunder-showers in east of England. Sky clearing later. *Temperature* inclined to rise in several places, but not quite reaching 70° in our Islands ; maxima of 72° to 77° at several Continental stations. *Wind* Westerly and North-Westerly, strong to a gale in the far north, moderate to fresh elsewhere ; beginning to "back" a little in the west of Ireland towards night. *Sea* rough in north-west and extreme north, and off Ushant. *Barometer* falling in north ; rising decidedly elsewhere. The depression of yesterday (greatly modified) now off the north of Scotland, and moving north-eastwards slowly. Fresh fall of barometer commencing in west during the afternoon.	
		**Monday, June 11.** *Weather* becoming rainy again in the west, fine and warm in the east and south of our area. Rainfall becoming heavy in Ireland and west of Scotland. *Temperature* rising decidedly in the east ; daily maxima recorded being 68° at York, 71° at Loughborough and in London, 74° at Cambridge. All below 60° in Ireland. *Wind* strong from South in the west and north-west, light from South-west in the east and south ; reaching the force of a moderate gale at some western ports during the day, and then "veering" slightly. *Sea* rough in west and north-west. *Barometer* falling decidedly in west, and fall spreading eastwards subsequently. Yesterday's depression now off the north-west of Norway ; new one (not deep) approaching Irish coast from south-westwards.	

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 89 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ♋	54	36	50·1	42·0	45·8	− 4·2	27	0	4	1·46	+1·01	*	*
	Stornoway ♋	57	32	54·7	41·7	47·8	− 3·6	42	1	6	0·85	+0·17	40	33
	Wick ♋	57	32	53·6	41·9	47·3	− 3·9	38	0	4	0·56	+0·16	*	*
	Lairg ♋	62	28	56·4	39·7	47·5	− 2·7	48	6	4	0·74	+0·17	*	*
	Glencarron ♋	62	34	58·5	41·3	49·3	− 1·9	54	2	6	1·21†	?	?	?
	Fort Augustus ♋	65	32	58·2	43·0	50·1	− 3·7	57	0	6	0·65†	?	*	*
1. SCOTLAND, E.	Nairn ♋	64	32	58·4	41·0	49·1	− 4·3	54	3	4	0·38	−0·05	*	*
	Aberdeen ♋	62	34	57·0	41·9	48·9	− 3·8	49	0	3	0·45	+0·02	48	40
	Braemar ♋	61	26	56·8	37·7	46·6	− 4·2	50	12	4	0·85	+0·26	31‡	26‡
	Ochtertyre ♋	72	39	60·1	45·0	52·0	− 1·6	70	0	5	1·58	+0·93	*	*
	Leith ♋	66	39	57·0	43·9	49·9	− 4·4	55	0	5	0·56	+0·14	*	*
	Marchmont ♋	64	36	58·0	42·9	49·9	− 3·1	55	0	5	0·93	+0·33	37	31
2. ENGLAND, N.E.	Alnwick Castle	63	43	56·6	46·6	51·3	− 2·1	65	0	4	0·39	−0·07	*	*
	Durham	68	38	59·8	45·3	52·1	− 2·4	71	0	4	0·61	+0·13	31	26
	Shields	66	41	56·9	44·9	50·5	− 3·0	60	0	4	0·28	−0·12	*	*
	Scarborough ℳ	65	43	58·2	46·6	52·0	− 2·2	70	0	4	0·99	+0·54	32‡	27‡
	York	68	36	61·4	45·4	52·8	− 3·1	76	0	4	0·63	+0·13	29	25
	Spurn Head	59	43	55·4	47·4	51·1	− 3·6	64	0	4	0·80	?	*	*
3. ENGLAND, E.	Hillington ℳ	73	41	65·8	46·9	55·7	+ 0·3	96	0	4	0·24	−0·26	37	32
	Yarmouth	65	45	57·7	49·1	53·1	− 2·6	78	0	5	0·09	−0·36	*	*
	Geldeston	68	42	62·5	47·6	54·5	− 1·9	88	0	3	0·06	−0·34	37	32
	Cambridge	74	41	66·9	47·0	56·3	− 0·3	100	0	0	—	−0·53	30	26
	Rothamsted	70	41	63·8	47·2	54·9	− 2·7	90	0	5	0·41	−0·11	*	*
	Ingatestone					*							‡	‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	70	45	63·3	48·9	55·6	− 0·8	95	0	5	1·10	+0·53	23‡	20‡
	Loughborough	71	44	63·4	48·0	55·2	− 2·3	92	0	5	0·64	+0·10	*	*
	Leicester													
	Cheadle ℳ	65	41	59·1	45·8	52·0	− 2·4	70	0	5	0·83	+0·13	*	*
	Churchstoke ℳ	67	41	60·4	46·1	52·8	− 2·7	76	0	4	1·20	+0·70	27	23
	Hereford ℳ	68	44	63·5	47·9	55·2	− 1·7	92	0	5	1·57	+1·07	*	*
	Cirencester	66	42	61·6	47·0	53·8	− 2·6	83	0	5	0·88	+0·33	33	29
	Oxford	68	45	62·7	48·9	55·3	− 2·1	93	0	5	0·44	−0·06	32	28
5. ENGLAND, S.	London	71	46	64·9	49·6	56·7	− 1·8	103	0	5	0·36	−0·12	30‡	27‡
	Strathfield Turgiss ℳ	71	42	65·6	47·9	56·1	− 0·2	99	0	5	0·45	0·00	*	*
	Dungeness	60	46	57·7	50·4	53·5	− 3·4	81	0	4	0·46	+0·06	*	*
	Hastings (St. Leonard's)	62	47	59·7	49·2	54·1	− 2·9	85	0	5	0·40	0·00	31	27
	Southampton	69	46	64·4	50·4	56·9	− 0·5	104	0	5	1·04	+0·59	32	28
	Hurst Castle	65	45	60·9	50·7	55·4	− 1·7	94	0	5	0·84	+0·39	*	*
	Stowell ℳ	63	41	61·0	48·0	54·1	− 1·4	85	0	5	1·27	?	24‡	21‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	64	38	59·3	45·9	52·1	− 0·7	71	0	5	2·78†	+1·65	*	*
	Glasgow	64	38	57·1	44·5	50·4	− 3·2	59	0	5	1·05	+0·43	25	21
	Ardrossan	62	38	57·3	44·6	50·5	− 3·7	60	0	4	1·76	+1·21	*	*
	Glenlee ♋	63	33	56·9	45·2	50·6	− 2·9	60	0	5	2·22	?	*	*
	Douglas (Isle of Man)	63	44	56·6	48·3	52·2	− 1·7	71	0	6	1·05	+0·55	26	22
7. ENGLAND, N.W.	Newton Reigny (Penrith)	66	30	58·8	43·2	50·5	− 3·4	60	0	4	0·46	−0·04	38	32
	Barrow-in-Furness	63	41	59·3	47·9	53·2	− 2·5	78	0	5	0·24	−0·27	*	*
	Stonyhurst	65	39	57·8	46·1	51·5	− 3·7	67	0	5	0·73	−0·02	30	26
	Blackpool ℳ	63	43	60·5	47·7	53·7	− 2·5	82	0	4	0·27	−0·23	21	18
	Manchester	66	43	59·4	46·8	52·7	− 3·7	75	0	5	0·80	+0·12	*	*
	Liverpool Obsy (Bidston)	68	44	61·3	48·0	54·2	− 2·0	85	0	5	0·33	−0·12	*	*
	Llandudno ℳ	64	44	59·3	48·6	53·6	− 3·1	81	0	5	0·84	+0·42	20	17
	Holyhead	64	45	58·3	47·9	52·7	− 2·5	75	0	6	0·68	+0·23	*	*
8. ENGLAND, S.W.	Llandovery	68	40	63·0	48·1	55·0	− 1·4	91	0	4	1·44	+0·74	*	*
	Pembroke	58	38	55·9	47·9	51·6	− 4·1	67	0	6	1·20	+0·72	19	17
	Arlington (N. Devon)	63	41	60·6	47·1	53·4	− 2·5	80	0	5	1·03	+0·17	*	*
	Cullompton ℳ	65	46	?62·1	49·5	?55·4	−?1·4	?94	0	6	1·60	+1·02	23	20
	Falmouth	63	46	59·8	50·2	54·7	− 1·8	89	0	6	1·85	+1·18	21	19
	Plymouth	66	48	62·2	51·9	56·7	− 0·4	103	0	5	1·20	+0·72	25	22
	Prawle Point	61	45	57·6	48·0	52·5	− 2·8	74	0	4	1·47	?	*	*
9. IRELAND, N.	Malin Head	59	44	54·1	46·4	50·0	− 3·5	56	0	6	1·01	?	*	*
	Londonderry	65	39	59·1	45·8	52·0	− 2·7	70	0	6	1·58	+1·00	*	*
	Mullaghmore	62	43	57·4	47·4	52·1	− 3·7	71	0	6	2·69	+1·99	*	*
	Belmullet	60	47	58·1	49·0	53·1	− 1·1	78	0	6	1·93	?	*	*
	Markree Castle	67	43	58·3	47·2	52·4	− 3·1	73	0	7	3·23	+2·59	12	10
	Brookeborough	63	43	57·7	47·8	52·4	− 3·2	73	0	7	2·36	?	*	*
	Armagh	61	41	57·8	45·9	51·4	− 4·0	66	0	6	1·31	+0·83	13	11
	Donaghadee	63	45	57·1	47·7	52·1	− 2·6	71	0	7	1·58	+1·10	*	*
	Edgeworthstown	64	40	58·4	46·0	51·8	− 2·7	69	0	6	2·84	+2·14	*	*
10. IRELAND, S.	Dublin	63	44	59·8	49·5	54·3	− 1·4	86	0	5	1·21	+0·76	17	15
	Parsonstown	65	42	59·9	48·4	53·9	− 1·7	83	0	6	3·39	+2·85	15	13
	Kilkenny	62	42	58·6	47·7	52·8	− 2·7	76	0	6	2·90	+2·29	*	*
	Waterford	62	43	59·4	48·9	53·8	− 3·0	83	0	5	3·21	+2·64	*	*
	Roche's Point	60	48	57·4	50·9	53·6	− 3·6	81	0	4	3·27	+2·52	*	*
	Valencia	63	45	59·6	51·6	55·3	0·0	93	0	6	2·01	+1·23	14	12
	Killarney	63	40	59·9	48·9	54·0	− 1·6	84	0	7	2·25	?	*	*
	Foynes	66	46	60·7	49·8	54·9	− 0·3	90	0	7	2·21	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	63	41	59·3	50·3	54·5	− 1·9	88	0	6	1·03	+0·60	*	*
	Jersey (Noirmont)	65	52	62·0	53·0	57·2	0·0	106	0	5	1·32	+0·90	26	23

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ♋ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 24.] *Second Series.* WEEK ENDING MONDAY, 18TH JUNE, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

DISTRICTS. (See p. 96.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
	°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	74	37	59·9	43·3	51·0	2 below.	63	+ 5	0	0	401	− 69	711	+201
1. SCOTLAND, EAST	78	36	62·8	44·3	52·9	1 below.	76	− 4	0	0	522	−143	700	+157
2. ENGLAND, N.E.	69	39	59·6	45·3	52·0	4 below.	70	−16	0	0	548	−145	555	+ 73
3. ENGLAND, EAST	75	38	61·1	46·3	53·2	5 below.	78	−20	0	0	714	−156	661	+154
4. MIDLAND COUNTIES	69	36	62·2	43·7	52·3	6 below.	72	−23	0	0	707	−194	654	+150
5. ENGLAND, SOUTH	74	37	60·7	46·8	53·3	5 below.	79	−25	0	0	721	−248	577	+204
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	74	38	61·8	46·3	53·5	2 below.	81	− 3	0	0	580	−151	505	+107
7. ENGLAND, N.W.	69	37	60·2	46·8	53·1	4 below.	78	−12	0	0	599	−171	500	+117
8. ENGLAND, S.W.	73	37	61·6	46·0	53·3	4 below.	79	−17	0	0	708	−249	487	+254
9. IRELAND NORTH	75	35	60·9	45·8	52·8	3 below.	76	− 9	0	0	650	−162	417	+ 67
10. IRELAND, SOUTH	73	37	63·6	47·4	55·0	2 below.	91	− 1	0	0	827	−156	352	+113
— CHANNEL ISLANDS	70	47	60·6	50·0	54·8	3 below.	90	− 9	0	0	840	−205	247	+154

Rainfall. Bright Sunshine.

DISTRICTS. (See p. 96.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
		10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	3	2	3 less.	117	+13	18·5	0·0	71	57	615	− 14	29	− 1
1. SCOTLAND, EAST	2	2	3 less.	96	+12	12·8	+0·3	57	47	637	− 56	31	− 3
2. ENGLAND, N.E.	3	3	2 less.	85	+ 2	9·9	−1·0	31	26	565	− 56	27	− 3
3. ENGLAND, EAST	5	6	1 less.	84 *	− 1	8·4	−2·0	28	24	597 *	−160	29	− 8
4. MIDLAND COUNTIES	3	4	2 less.	75	− 8	8·7	−3·1	37	32	561	−105	27	− 5
5. ENGLAND, SOUTH	4	4	0 (average).	78	− 2	9·8	−1·8	34	30	579	−122	28	− 6
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	3	5	4 less.	85	− 8	18·8	−0·5	61	51	663	+ 6	32	0
7. ENGLAND, N.W.	3	3	3 less.	87	+ 2	8·9	−4·7	52	44	597	− 68	29	− 3
8. ENGLAND, S.W.	4	5	2 less.	85	− 6	12·7	−5·4	60	52	715	− 54	35	− 2
9. IRELAND, NORTH	3	7	1 more.	92	−10	14·7	−0·1	62	53	581	− 78	28	− 4
10. IRELAND, SOUTH	3	5	1 less.	83	−15	16·3	−1·2	65	56	684	− 50	33	− 2
— CHANNEL ISLANDS	3	2	3 less.	103	+ 5	12·5	−1·3	64	57	790	−127	38	− 6

General Remarks.

Weather during this period has undergone a decided change; at first it was dull and very showery in the west and north, fine and rather warm in the south-east. On Wednesday night, however, a change took place, the wind shifted to the North-Westward and Northward at our eastern stations, with cold rain, while the disturbed weather in the west and north-west showed signs of improvement. Gloomy cold weather continued prevalent in the east, with occasional rain, while in the west it gradually became bright, dry, and at times warm. Thunderstorms occurred in many places on the 13th and 14th.

Temperature has been below the average everywhere, the deficit varying from 4° to 6° over the English districts, from 2° to 3° in Ireland, and from 1° to 2° in Scotland. The highest of the daily maxima were registered on very various dates; over the Midlands and eastern parts of England they were recorded mainly on the 12th, and varied from 69° to 74° in value; in Scotland and Ireland (as a whole) they occurred towards the end of the period, and varied in value from 74° to 78° in the former country, and from 70° to 75° in the latter, in Wales and the western parts of England the conditions approximated to those of Ireland. The lowest of the minima (and they were very low for the time of year) occurred in central and southern England on the 18th, but over Norfolk on the 14th and 15th, in Scotland and Ireland on the 12th or 13th. Over some parts of the midland and southern counties, the thermometer fell to 36° or 37° in the shade, and to rather below the freezing point on the grass early on the 18th, while in the north of Norfolk frost occurred on the grass both on the 14th and 15th.

Rainfall was more than the mean in "Ireland, N." and equal to it in "England, S.", in all other districts it was less, the deficit being as great as four-tenths of an inch in "Scotland, W." and three-tenths over the northern parts of Great Britain.

Bright sunshine was very deficient over the eastern parts of England (where it had been in excess previously) but was abundant in the west and north. The percentage of the possible duration varied from 24 in "England, E." and 26 in "England, N.E.", to 44 in "England, N.W.", to 56 in "Ireland, S.", and to 57 in the "Channel Islands" and "Scotland, N."

Depressions observed.—On the 12th and 13th, a depression lay over the western and north-western parts of our Islands; at first it was of moderate depth, but gradually filled up, and the distribution of pressure then underwent a radical change. Shallow disturbances began to appear over Germany, France, and the North Sea, and, after another shallow system had passed quickly over the British Isles in a south-easterly direction on the 15th, the barometer became permanently highest in the west and north-west, lowest in the east and south; the gradients, however, were slight, and the distribution over the greater part of our Islands was mainly of an anticyclonic type.

* These values have been altered slightly owing to the receipt of further information.

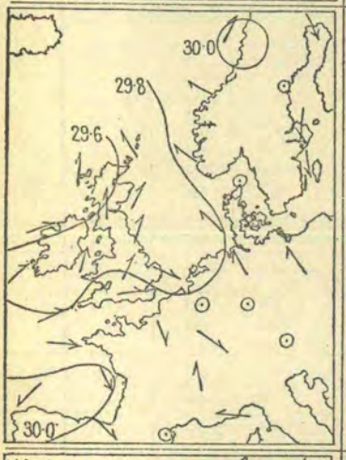
ERRATUM.—In the "General Remarks" for last week the figures quoted in line 13 should read "36° to 41°".

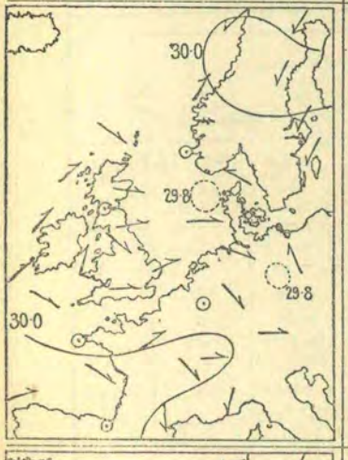
II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

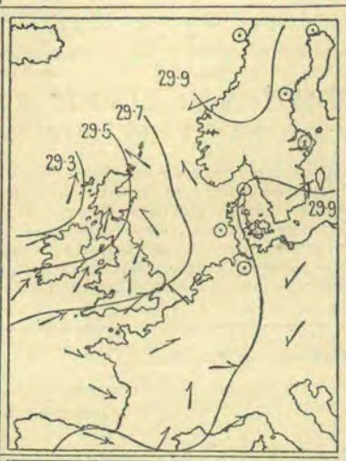
PRESSURE AND WIND.

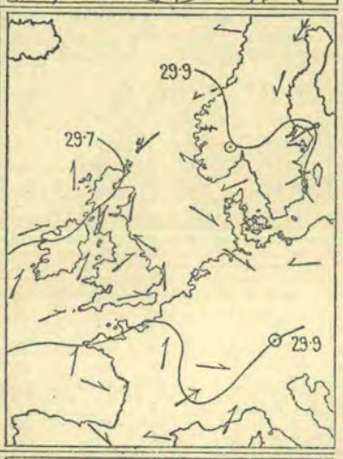
8 a.m.

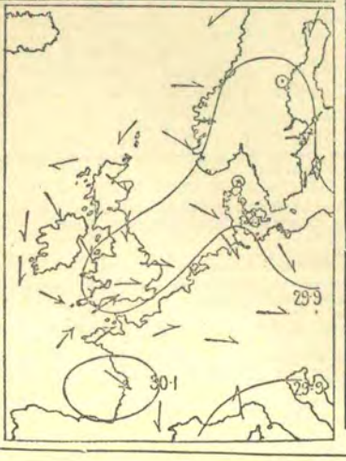




6 p.m.







Weather

During the 24 hours succeeding

8 a.m. on the dates given.

Tuesday, June 12.

Weather still very rainy in Ireland, and showery later on in almost all other parts of the Kingdom; rain not reaching our south-eastern counties till evening.

Temperature risen slightly, but not reaching 60° at the Irish stations all day; maxima over England 69° at Loughborough, 74° in London, and 75° at Cambridge.

Wind moderate South-Westerly and Westerly in Ireland, fresh to strong from South and South-West over Great Britain, Easterly in the west of Norway; subsequently freshening in Ireland also from the South-Westward.

Sea rough in west and south-west.

Barometer falling generally; depression off our north-west coasts spreading eastwards and southwards, but moving very slowly to the northward.

Wednesday, June 13.

Weather still rather showery, with bright intervals, in many parts of our Islands, and becoming unsettled on the Continent also. Thunderstorms in many places, epecially on the Continent.

Temperature changing irregularly, but as a whole decreasing; maximum at Cambridge 72°, but in London only 69°, and at Loughborough 67°.

Wind moderate; Southerly in the north, South-Westerly in other parts of our Islands, Westerly to North-Westerly in France and Spain. Still Easterly in the west of Norway.

Sea rather rough in the west and south-west.

Barometer rising in our Islands, falling on the Continent. Depression in north-west filling up slowly, but a shallow "hollow" forming over the North Sea, the Netherlands, and western Germany. Two high-pressure areas, one over Spain, the other over north of Scandinavia, neither of great intensity.

Thursday, June 14.

Weather fine at first in the west, dull and showery in the east, afterwards showery and unsettled everywhere, with sharp thunderstorms over Great Britain and at several Continental stations.

Temperature risen fitfully in the east of Scotland, fallen elsewhere. Maximum at Leith 72°, but in London only 62°, and at Barrow 57°.

Wind South-Westerly at our western stations, North-Westerly in the east, and afterwards extremely variable over England; light generally in force as a whole, calm in several places at night.

Sea very little disturbed.

Barometer rising west, falling east; disturbances forming over Germany and the North Sea, and extending to our eastern counties. New shallow depression approaching the west of Scotland in succeeding night.

Friday, June 15.

Weather fair in Ireland and the northern parts of Scotland, cloudy and rainy over England, and afterwards at the Continental stations also. No thunderstorms reported.

Temperature low, especially over the inland parts of England, where the daily maxima were nearly all below 60°; maximum over Central Ireland several degrees higher.

Wind very changeable; South-Easterly to South-Westerly over Great Britain, North-Westerly in Ireland, and subsequently becoming Northerly to North-Easterly in almost all districts.

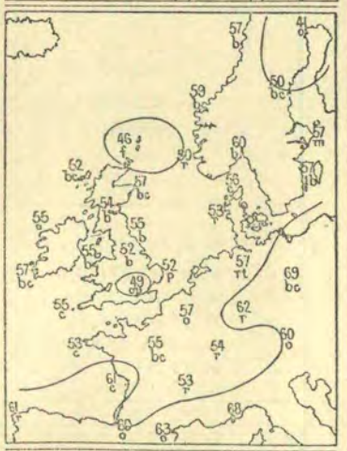
Sea little disturbed.

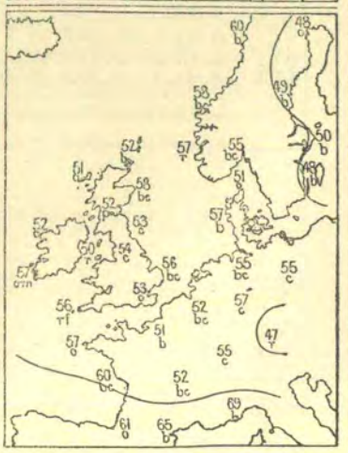
Barometer unsteady; depression off the north-west coasts at 8 a.m. subsequently travelling in a south-easterly direction right across England. Barometer rising slowly in its rear.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



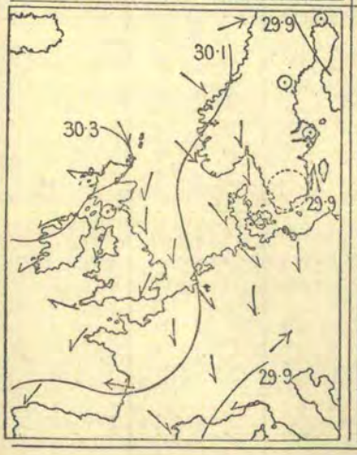


SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.



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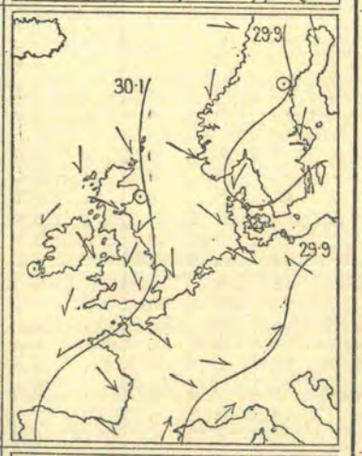
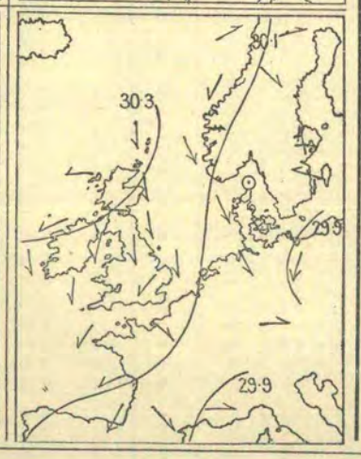




Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, June 16.

Weather becoming fairer and more quiet than on previous day; cloudy in most places, but dry at all excepting the south-eastern stations, where some cold rain fell. Rain general over Germany, Belgium, and the east of France.

Temperature low, and falling at all but the western stations. The 8 a.m. reading below 50° in several parts of Great Britain, and daily maxima rising to very little above 60° during day.

Wind North-Easterly, moderate to fresh in the East and South-East, light elsewhere. Moderate from North-West over the Bay of Biscay. The North-Easterly wind lulling in the east later.

Sea rather rough in Straits of Dover, moderate in the Channel generally and at Yarmouth and Holyhead, slight or smooth elsewhere.

Barometer rising in our Islands; yesterday's depression passing away towards Western Germany, gradients becoming slight.

Sunday, June 17.

Weather fine and bright in the west and north, dull and cold in north-east, east, and south, with very slight misty showers in some places. Sky clearing in south-east, for a time, towards night.

Temperature still very low except on our south-western coasts, and in the north of Sweden. Haparanda 18°, and Valencia 13° warmer than Oxford at 8 a.m. Maxima as low as 55° in London and 58° at Oxford; night very cold over our inland counties—almost frosty in several places.

Wind variable from the Northward (North-West to North-East) and light in force.

Sea little disturbed.

Barometer still rising generally, but not quickly. Distribution of pressure becoming anticyclonic all over the British Isles and west of France; type, northerly; gradients, slight.

Monday, June 18.

Weather dull and gloomy at most of the eastern stations, with slight rain in some localities and in Scotland; generally fair and bright in the west and south-west. Rain in London and its neighbourhood at night, but not much of it.

Temperature still very low over England; almost a frost early in the morning at Loughborough and Oxford; relatively high in Ireland and Sweden. Maxima 81° at Hernösand, 72° at Valencia; only 55° in London.

Wind Northerly and North-Easterly, light to moderate. Very light, and rather more Easterly, in Ireland.

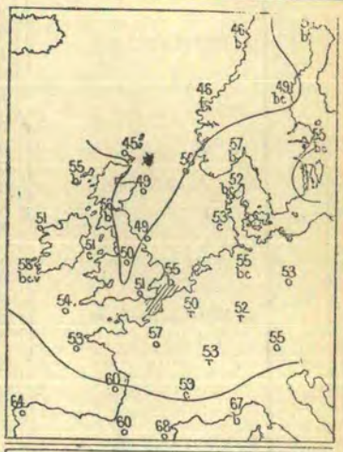
Sea very little disturbed.

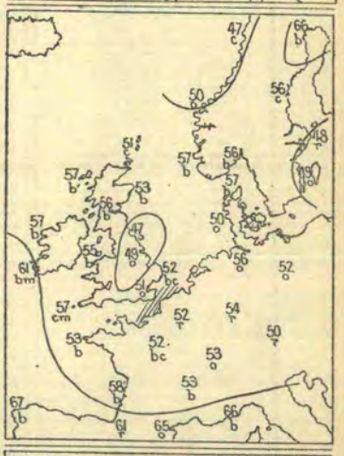
Barometer rising. Still highest in north and north-west; lowest in east and south-east; gradients slight. Slight fall in France towards night, and in Ireland later.

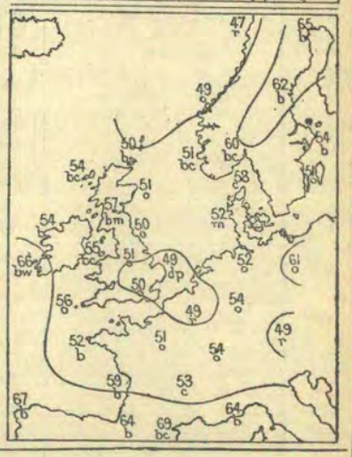
Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.







Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending June 11	Ingatestone	68	42	63·1	47·8	55·0	− 2·7	91	0	4	0·32	−0·16	32	28

III.—DATA from which the SUMMARY on page 93 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ℌ	55	40	52·9	43·4	47·8	− 3·4	41	0	2	0·05	−0·43	*	*
	Stornoway	59	38	56·4	42·9	49·2	− 3·3	50	0	3	0·44	−0·26	71	57
	Wick	68	39	60·0	44·9	51·9	− 0·6	69	0	2	0·11	−0·31	*	*
	Lairg ℌ	70	37	64·1	41·4	52·0	+ 0·4	73	2	4	0·36	−0·22	*	*
	Glencarron ℌ	70	40	61·3	43·1	51·6	− 0·6	67	0	3	0·35†	?	?	?
	Fort Augustus ℌ	74	38	64·4	44·0	53·5	− 1·2	81	0	3	0·10†	?	*	*
1. SCOTLAND, E.	Nairn	68	41	63·3	45·1	53·6	− 1·0	81	0	2	0·02	−0·43	*	*
	Aberdeen	64	42	60·0	45·6	52·3	− 2·4	72	0	1	0·15	−0·30	65	53
	Braemar ℌ	69	36	62·8	42·0	51·7	− 0·3	68	0	2	0·41	−0·19	59‡	48‡
	Ochtertyre ℌ	78	39	67·3	44·0	54·8	− 0·1	90	0	3	0·36	−0·32	*	*
	Leith	72	42	62·4	45·6	53·4	− 2·1	80	0	4	0·19	−0·23	*	*
	Marchmont ℌ	65	40	61·0	43·4	51·6	− 2·7	67	0	1	0·08	−0·52	47	39
2. ENGLAND, N.E.	Alnwick Castle	63	43	57·4	44·7	50·6	− 4·0	60	0	4	0·41	−0·05	*	*
	Durham	68	39	60·8	43·5	51·6	− 4·1	67	0	2	0·12	−0·37	36	30
	Shields	67	44	59·1	45·7	51·9	− 3·5	69	0	2	0·08	−0·34	*	*
	Scarborough ℌ	69	44	58·9	45·8	51·9	− 3·6	69	0	3	0·29	−0·20	28‡	24‡
	York	67	41	62·6	44·0	52·7	− 4·7	75	0	4	0·55	−0·03	30	25
	Spurn Head	69	45	58·7	48·3	53·1	− 3·1	78	0	5	0·39	?	*	*
3. ENGLAND, E.	Hillington ℌ	75	38	62·6	44·3	52·8	− 4·4	76	0	4	0·23	−0·32	30	26
	Yarmouth	63	45	58·3	48·6	53·1	− 4·4	78	0	7	0·15	−0·32	*	*
	Geldeston	74	43	61·6	46·8	53·7	− 3·9	82	0	7	0·37	−0·04	29	25
	Cambridge	75	42	63·0	45·4	53·6	− 5·3	81	0	5	0·90	+0·34	24	21
	Rothamsted	71	44	60·2	46·3	52·8	− 6·6	76	0	4	0·23	−0·29	*	*
	Ingatestone	72	45	60·6	46·5	53·1	− 6·5	78	0	5	0·40	−0·12	27‡	23‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	69	38	63·1	43·3	52·5	− 5·3	74	0	4	0·28	−0·32	29‡	25‡
	Loughborough	69	39	64·1	44·3	53·5	− 5·5	81	0	3	0·26	−0·32	*	*
	Leicester													
	Cheadle ℌ	65	40	60·0	43·1	51·0	− 5·9	63	0	2	0·25	−0·47	*	*
	Churchstoke ℌ	68	39	62·7	41·8	51·5	− 5·4	67	1	4	0·27	−0·25	47	41
	Hereford ℌ	67	41	64·2	45·6	54·3	− 4·1	86	0	3	0·57	+0·05	*	*
	Cirencester	65	36	60·3	41·9	50·5	− 7·0	60	0	3	0·39	−0·20	41	36
	Oxford	67	39	61·0	45·9	52·9	− 5·8	76	0	4	0·41	−0·12	30	26
5. ENGLAND, S.	London	74	45	62·1	47·9	54·5	− 5·6	88	0	6	0·54	+0·05	27‡	24‡
	Strathfield Turgiss ℌ	71	37	63·5	44·6	53·4	− 4·2	80	0	3	0·15	−0·33	*	*
	Dungeness	67	42	58·4	47·7	52·7	− 5·8	75	0	5	0·56	+0·16	*	*
	Hastings (St. Leonard's)	67	45	58·9	47·8	53·0	− 5·2	77	0	5	0·84	+0·44	37	32
	Southampton	69	40	62·7	47·3	54·5	− 4·1	88	0	3	0·23	−0·24	38	33
	Hurst Castle	62	42	59·7	48·6	53·8	− 4·5	83	0	4	0·42	−0·07	*	*
	Stowell ℌ	63	39	59·4	43·8	51·1	− 6·4	64	0	4	0·23	?	33‡	29‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	69	43	63·0	45·8	53·8	− 0·7	83	0	2	1·37†	+0·16	*	*
	Glasgow	74	43	64·3	47·6	55·4	+ 0·4	94	0	3	0·15	−0·53	55	45
	Ardrossan	69	43	60·9	47·9	54·0	− 1·5	84	0	3	0·21	−0·39	*	*
	Glenlee ℌ	69	38	61·2	43·7	51·8	− 2·8	64	0	2	0·52	?	*	*
	Douglas (Isle of Man)	69	42	59·7	46·6	52·7	− 2·7	75	0	3	0·34	−0·18	66	56
7. ENGLAND, N.W.	Newton Reigny (Penrith)	64	37	60·4	42·4	50·8	− 4·6	62	0	3	0·20	−0·32	58	49
	Barrow-in-Furness	65	40	59·1	48·3	53·3	− 3·5	79	0	2	0·08	−0·48	*	*
	Stonyhurst	67	42	60·6	45·0	52·3	− 4·1	72	0	4	0·21	−0·59	50	42
	Blackpool ℌ	67	42	60·5	47·4	53·5	− 4·0	81	0	3	0·14	−0·37	50	42
	Manchester	65	42	61·0	45·1	52·5	− 5·4	74	0	4	0·42	−0·33	*	*
	Liverpool Obsy (Bidston)	69	45	61·4	48·4	54·5	− 3·2	88	0	4	0·23	−0·22	*	*
	Llandudno ℌ	63	43	59·9	48·8	54·0	− 3·7	84	0	4	0·30	−0·15	40	42
	Holyhead	61	47	58·6	49·0	53·5	− 3·1	81	0	3	0·45	−0·04	*	*
8. ENGLAND, S.W.	Llandovery	73	39	65·9	42·1	53·2	− 4·9	78	0	5	0·86	+0·13	*	*
	Pembroke	65	46	59·3	49·6	54·1	− 2·8	85	0	4	0·57	+0·08	71	62
	Arlington (N. Devon)	65	38	60·6	44·3	51·9	− 5·5	69	0	4	0·74	−0·19	*	*
	Cullompton ℌ	65	37	62·2	43·3	52·1	− 6·0	71	0	4	0·56	−0·04	45	39
	Falmouth	66	44	61·4	47·9	54·2	− 3·6	85	0	3	0·14	−0·54	67	59
	Plymouth	68	45	63·3	49·2	55·8	− 2·9	97	0	3	0·23	−0·26	55	49
	Prawle Point	61	41	58·6	45·6	51·7	− 5·0	68	0	4	0·22	?	*	*
9. IRELAND, N.	Malin Head	59	44	53·7	47·6	51·4	− 3·5	63	0	4	0·73	?	*	*
	Londonderry	75	43	67·1	46·1	55·9	+ 0·1	97	0	2	0·52	−0·08	*	*
	Mullaghmore	67	41	59·4	46·4	52·5	− 4·4	74	0	3	0·98	+0·23	*	*
	Belmullet	62	45	57·7	48·3	52·7	− 2·7	75	0	2	0·93	?	*	*
	Markree Castle	65	35	61·2	42·6	51·3	− 5·5	65	0	4	0·69	−0·02	62	53
	Brookeborough	71	37	62·1	43·4	52·1	− 5·0	71	0	3	0·56	?	*	*
	Armagh	69	41	62·3	44·5	52·8	− 4·2	76	0	3	0·44	−0·06	62	53
	Donaghadee	64	45	59·9	49·3	54·2	− 1·8	85	0	3	0·75	+0·26	*	*
	Edgeworthstown	70	38	62·9	43·6	52·6	− 3·8	74	0	3	0·68	−0·10	*	*
10. IRELAND, S.	Dublin	67	43	62·5	48·2	54·9	− 2·1	90	0	3	0·29	−0·16	70	60
	Parsonstown	70	39	64·1	46·0	54·4	− 2·4	87	0	3	0·60	−0·08	60	52
	Kilkenny	69	37	63·9	47·0	54·9	− 2·0	90	0	3	0·58	+0·05	*	*
	Waterford	73	38	66·3	47·6	56·3	− 1·8	100	0	1	0·23	−0·35	*	*
	Roche's Point	66	45	61·6	49·3	55·0	− 3·7	91	0	2	0·12	−0·64	*	*
	Valencia	72	45	62·3	49·1	55·2	− 1·2	92	0	3	1·38	+0·58	65	57
	Killarney	72	42	64·8	44·7	54·6	− 2·4	88	0	2	0·31	?	*	*
	Foynes	71	42	63·5	47·5	54·9	− 1·6	90	0	3	0·75	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	62	48	59·3	50·0	54·3	− 3·2	86	0	4	0·33	−0·12	*	*
	Jersey (Noirmont)	70	47	61·9	50·0	55·3	− 2·9	93	0	1	0·06	−0·37	64	57

Stations marked ℌ are in connection with the Royal Meteorological Society, and those marked ℌ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 25.] *Second Series.* WEEK ENDING MONDAY, 25TH JUNE, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 100.)	Observed during the Week. Highest.	Observed during the Week. Lowest.	Averages of Daily Maxima.	Averages of Daily Minima.	Averages of Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	For the Week. Difference from Mean.	For the Week. Below 42°	For the Week. Difference from Mean.	From January 3, 1888. Above 42°.	From January 3, 1888. Difference from Mean.	From January 3, 1888. Below 42°.	From January 3, 1888. Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	79	35	60·4	43·9	51·7	2 below.	68	+ 5	0	0	469	− 70	711	+201
	1. SCOTLAND, EAST	77	34	62·1	43·9	52·3	3 below.	72	−14	0	0	594	−163	700	+157
	2. ENGLAND, N.E.	82	42	56·7	45·5	50·7	6 below.	61	−32	0	0	609	−182	555	+ 73
	3. ENGLAND, EAST	88	45	65·4	49·6	56·9	3 below.	104	+ 4	0	0	818	−160	661	+154
	4. MIDLAND COUNTIES	84	35	66·3	47·7	56·4	3 below.	101	− 3	0	0	808	−200	654	+150
	5. ENGLAND, SOUTH	85	44	66·2	51·0	58·0	1 below.	112	+ 1	0	0	833	−249	577	+204
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	81	37	69·2	47·4	57·6	2 above.	109	+28	0	0	689	−136	505	+107
	7. ENGLAND, N.W.	82	35	67·9	47·6	57·1	1 below.	106	+19	0	0	705	−166	500	+117
	8. ENGLAND, S.W.	80	40	65·8	51·1	58·0	1 below.	112	+19	0	0	820	−242	487	+254
	9. IRELAND NORTH	82	44	68·2	50·9	58·9	2 above.	118	+36	0	0	768	−139	417	+ 67
	10. IRELAND, SOUTH	76	44	66·8	51·6	58·7	1 above.	117	+28	0	0	944	−137	352	+113
	— CHANNEL ISLANDS	78	45	62·7	52·2	57·0	2 below.	105	+ 9	0	0	945	−208	247	+154

	DISTRICTS. (See p. 100.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	0	–	6 less.	117	+ 9	18·5	−0·6	63	50	678	+ 20	31	+ 1
	1. SCOTLAND, EAST	0	less than ½	5 less.	96	+ 8	12·8	−0·3	71	57	708	− 19	32	− 1
	2. ENGLAND, N.E.	3	2	3 less.	88	+ 1	10·1	−1·3	50	42	615	− 35	28	− 2
	3. ENGLAND, EAST	4	6	0 (average).	88	− 1	9·0	−1·9	44	38	641	−154	29	− 8
	4. MIDLAND COUNTIES	4	8	2 more.	79	− 8	9·5	−2·9	28	24	589	−111	27	− 5
	5. ENGLAND, SOUTH	4	8	3 more.	82	− 2	10·6	−1·5	30	27	609	−129	28	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	1	less than ½	6 less.	86	−11	18·8	−1·1	74	62	737	+ 45	34	+ 2
	7. ENGLAND, N.W.	2	2	5 less.	89	0	9·1	−5·1	60	51	657	− 38	30	− 2
	8. ENGLAND, S.W.	3	4	3 less.	88	− 7	13·1	−5·7	33	29	748	− 65	34	− 4
	9. IRELAND, NORTH	0	less than ½	6 less.	92	−15	14·7	−0·7	77	66	658	− 31	30	− 2
	10. IRELAND, SOUTH	2	2	5 less.	85	−17	16·5	−1·6	56	48	740	− 30	35	− 1
	— CHANNEL ISLANDS	2	4	1 less.	105	+ 2	12·9	−1·3	33	32	826	−136	38	− 6

General Remarks.

Weather has varied greatly in different parts of the Kingdom. Over Ireland and Scotland it was generally fine, but in most parts of England the conditions were dull and unsettled, with severe thunderstorms in many places. Towards the end of the period thunderstorms were experienced in some parts of Ireland also. On our south and south-west coasts much fog or mist prevailed at times.

Temperature has differed considerably in the various districts; it has been on the whole rather above the mean in Ireland and the west of Scotland, slightly below over the west and south of England, and from 3° to 6° below over the eastern and north-eastern parts of the Kingdom. At the commencement of the period the thermometer was extremely low for the time of year over our more southern counties. In London and at Cambridge the maximum was only 53°, at Rothamsted 52°, and at Hillington 51°. As the week advanced, however, temperature increased very generally, and on the 25th maxima between 80° and 88° were recorded in most parts of England, while in Ireland and Scotland they ranged from 76° to 82°. The lowest of the minima were registered in most places either on the 19th or 20th, when the sheltered thermometer fell to between 34° and 37° over the inland parts of Scotland, to 35° over the "Midland Counties" and "England, N.W.", and to between 40° and 45° elsewhere.

Rainfall has been almost entirely absent from Scotland, and considerably less than the mean over Ireland and the western and north-eastern parts of England, but in the "Midland Counties" and "England, S." an excess is shown.

Bright sunshine has been very deficient over southern, central, and south-western England, but over Ireland, Scotland, and the north of England the percentage of the possible amount of duration ranged from 42 to 66.

Depressions observed.—During the whole of this period the barometer has been high in all the more northern parts of our area, and the only depressions in our neighbourhood were observed over France and the Channel. These were small and very shallow, and at the close of the week were moving northwards towards England, producing the thunderstorms referred to above; some local thunderstorm disturbances appeared over the north of Ireland also.

A 54800. 350.—6/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

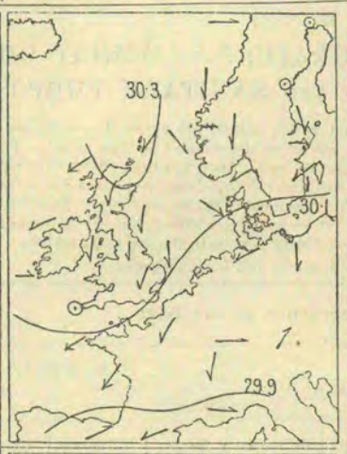
Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Tuesday, June 19.

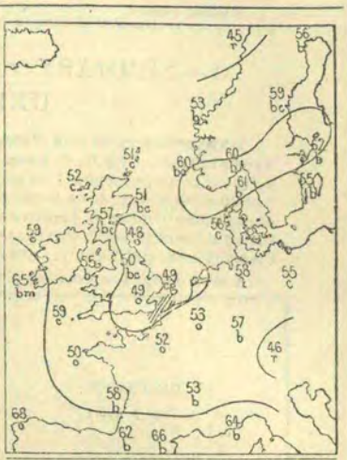
Weather fine and bright over Ireland, Scotland, and Scandinavia; dull and cold over the greater part of England, with slight rain at several of our eastern stations, and more in Germany and the south of France.

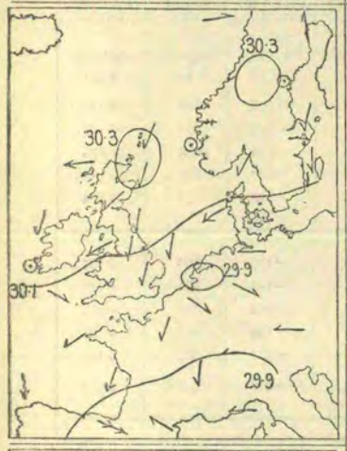
Temperature low in most places, but rather high in the south of Ireland and the south of Scandinavia. Daily maxima exceeding 70° in the latter district, and falling very little short of it in Ireland and the west of Scotland; not rising above 53° in London.

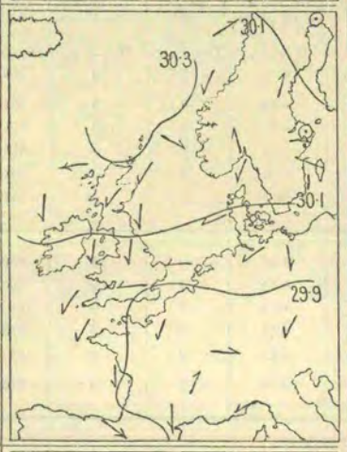
Wind Northerly and North-Easterly; fresh at the south-eastern stations; light in the west and north.

Sea moderate in east and south-east, slight or smooth elsewhere.

Barometer highest at the northern stations; lowest over Germany and the Mediterranean; gradients slight; rising over the eastern but falling over the western parts of our area during the day.







Wednesday, June 20.

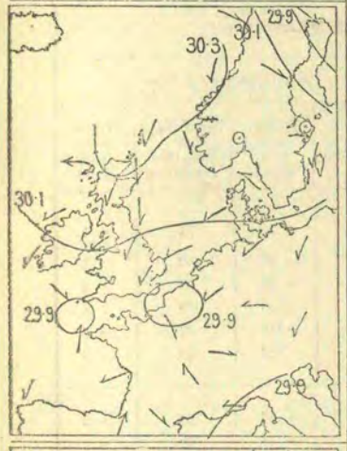
Weather becoming more generally showery, except in Scotland and the north of Ireland; thunderstorms occurring over our eastern counties and in parts of France at night.

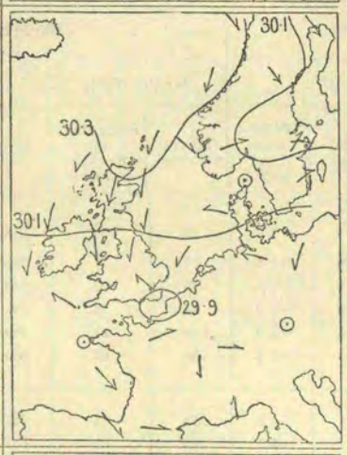
Temperature risen in Sweden and the south of Norway; not much changed elsewhere; still very low over Great Britain and France. Daily maxima 55° to 58° over our south-eastern counties, but ten degrees higher in Ireland, and 70° to 75° in Sweden.

Wind remaining Northerly to Easterly, but lulling considerably in the east of England at night.

Sea moderate in the east and south-east, smooth or nearly so elsewhere.

Barometer rising slightly over Scandinavia, falling elsewhere; still highest in the north. Depressions forming over France and the Netherlands, and spreading to our south-eastern counties later.





Thursday, June 21.

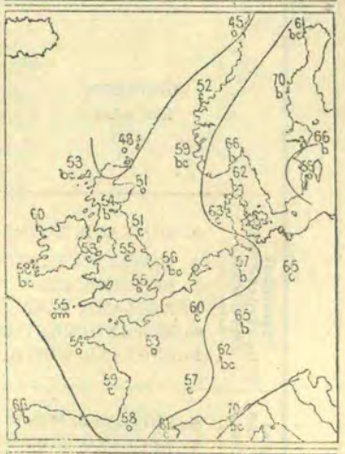
Weather much less settled than of late except in Scotland and the north of Ireland; severe thunderstorms in several parts of England and on the Continent; rainfall heavy at Oxford and Hurst Castle.

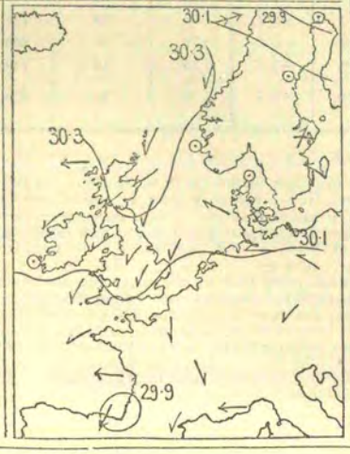
Temperature little changed in our Islands at first, but rising a little over England later. Maxima there 60° to 66°. Very high over Sweden, where maxima exceeded 80° in many places.

Wind more Easterly in our Islands than of late, moderate in force, very variable on the Continent.

Sea moderate in north-east and east, slight or smooth elsewhere.

Barometer still highest (30·3 ins. and more) in the north, lowest in south, gradients moderate. Extensive area of low pressure over France and south of England, with two well-marked minima, one over Belgium the other near Scilly. Latter dispersing during the day.





Friday, June 22.

Weather finer than on Thursday; slight rainfall at a few stations; little or no thunder. Sky clear in north and north-west, dull and foggy in eastern part of the Channel and in London; clearing later on.

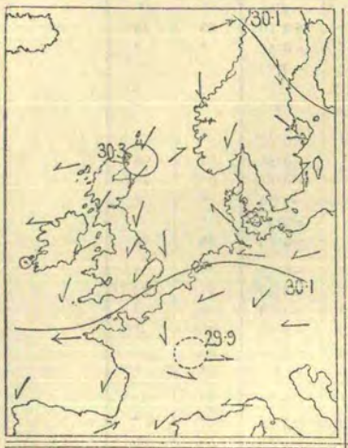
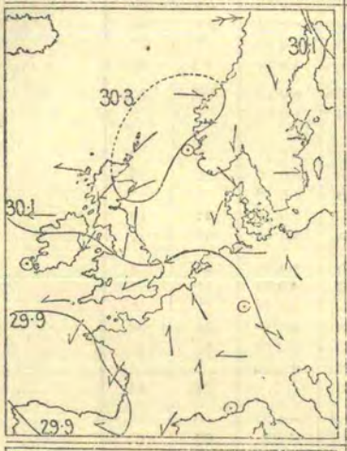
Temperature little changed over most parts of our Islands, risen, and air very close over France and south-east of England, but fallen greatly in Sweden. Daily maxima 70° to 72° over our south-eastern counties, 65° to 70° in Ireland, 64° to 68° in Sweden.

Wind North-Easterly, moderate, over the northern half of our Islands, very variable and light in the south; North-Westerly and Westerly over Scandinavia. A strong gale from West at Bodö in the evening.

Sea very little disturbed on our coasts.

Barometer still highest in the north (but the anticyclone of a less simple character than of late), lowest in south; gradients slight and irregular. Very shallow local depression over Sussex dispersing later.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Saturday, June 23.** *Weather* fine in Ireland and Scotland, foggy in the west of Norway, dull over England; unsettled over France, with thunderstorms at times over the southern Departments. Afterwards becoming fine over England. *Temperature* still low over England, high in Ireland and the south of Sweden. Daily maxima exceeding 70° in most places, and reaching 75° to 79° in Sweden, 80° and more over Germany and south of France. *Wind* light from the Eastward at the Irish stations, moderate North-Easterly over England, France and Germany, but becoming Westerly in Spain. North-Westerly breezes of considerable strength prevalent in Sweden. *Sea* very little disturbed. *Barometer*, after rising slightly, beginning to fall again in the south. Readings still highest in the north, but shallow "thunderstorm" depression developing over France. Large depression over Northern Russia moving south-eastwards.	
		**Sunday, June 24.** *Weather* still fine and bright in the north-west and north and over Germany; dull, close, and showery at first over our southern counties. Afterwards fine and bright over our southern counties, but thundery and rainy in Western Germany, Belgium, France, and the Channel Islands, as well as in some parts of Austria. *Temperature* increasing over England and continuing high in Ireland; daily maxima 70° to 77° in many districts, 80° to 86° in Germany and south of France. *Wind* fresh Northerly and North-Easterly over England, Easterly in Ireland, very light and variable at the French stations, Westerly and North-Westerly over Scandinavia. *Sea* moderate both at the western and eastern stations; smooth in the south and north. *Barometer* falling slowly; still highest in the north, but lowest over the Bay of Biscay. Secondary disturbances forming over France later.	
		Monday, June 25. *Weather* (though dull for a time) continuing fine in the north and north-west, but becoming much less settled over England. Thunderstorms occurring locally in some parts of Ireland and England later. Air very oppressive in London, and appearance threatening. Thunder and rain in France later. *Temperature* rising greatly during day, and exceeding 80° in many parts of England and the countries lying to the eastward of the North Sea. Daily maxima 88° at Cambridge, 85° in London, and 84° at Loughborough. *Wind* drawing into South-East in Ireland, East in Scotland, North-East over England, but remaining light. Westerly breeze of little strength over Spain and south-west of France; strong North-Westerly in Sweden. *Sea* slight or smooth generally. *Barometer* still falling; depression off the south-west of Ireland moving northwards; secondary hollow spreading eastwards over France, having in it several shallow minima. The whole system drifting slowly to northward.	

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ℌ	58	41	53·1	43·0	47·7	− 4·2	40	0	0	—	−0·48	*	*
	Stornoway	72	42	59·1	44·0	51·0	− 2·2	63	0	0	—	−0·70	63	50
	Wick	63	39	56·3	43·6	49·5	− 3·9	53	0	0	—	−0·42	*	*
	Lairg ℌ	71	35	65·7	41·4	53·1	+ 0·4	80	2	0	—	−0·60	*	*
	Glencarron ℌ	79	41	70·3	43·7	56·1	+ 3·1	99	0	0	— †	?	?	?
	Fort Augustus ℌ	63	44	57·9	47·9	52·6	− 2·9	74	0	0	— †	?	*	*
1. SCOTLAND, E.	Nairn	66	43	58·9	45·4	51·7	− 5·0	68	0	1	0·09	−0·36	*	*
	Aberdeen	63	40	59·3	44·7	51·5	− 4·3	67	0	0	—	−0·46	63	51
	Braemar ℌ	77	34	70·5	38·6	53·3	+ 0·1	93	10	0	—	−0·61	94‡	76‡
	Ochtertyre ℌ	73	39	70·4	46·1	57·4	+ 1·4	108	0	0	—	−0·70	*	*
	Leith	60	44	56·1	45·4	50·3	− 6·2	58	0	0	—	−0·46	*	*
	Marchmont ℌ	66	41	57·6	43·0	49·8	− 5·4	55	0	0	—	−0·65	55	45
2. ENGLAND, N.E.	Alnwick Castle	62	44	53·3	45·6	49·2	− 6·5	50	0	1	0·18	−0·29	*	*
	Durham	69	43	57·3	44·3	50·4	− 6·4	59	0	3	0·17	−0·33	41	34
	Shields	59	44	53·4	44·9	48·9	− 7·8	48	0	1	0·10	−0·35	*	*
	Scarborough ℳ	62	44	53·4	46·0	49·4	− 7·4	52	0	3	0·43	−0·10	56‡	47‡
	York	82	42	67·0	45·0	55·2	− 3·4	92	0	3	0·20	−0·37	54	46
	Spurn Head	61	45	55·6	47·0	51·0	− 6·4	63	0	4	0·15	?	*	*
3. ENGLAND, E.	Hillington ℳ	81	46	66·1	49·6	57·3	− 1·0	107	0	3	0·31	−0·26	43	37
	Yarmouth	65	47	59·1	51·1	54·7	− 4·0	89	0	3	0·30	−0·19	*	*
	Geldeston	76	46	65·6	50·9	57·7	− 0·9	110	0	3	0·28	−0·13	58	50
	Cambridge	88	45	69·1	48·4	58·0	− 2·4	112	0	4	0·34	−0·22	35	30
	Rothamsted	82	45	65·1	47·7	55·8	− 4·6	97	0	5	0·66	+0·13	*	*
	Ingatestone	81	45	67·6	49·9	58·1	− 2·8	113	0	4	1·40	+0·86	41‡	36‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	81	42	68·0	47·0	56·8	− 2·3	104	0	3	0·36	−0·24	38‡	32‡
	Loughborough	84	45	68·0	47·4	57·0	− 2·8	105	0	3	0·52	−0·04	*	*
	Leicester													
	Cheadle ℳ	79	42	66·1	46·7	55·7	− 2·7	96	0	2	0·83	+0·11	*	*
	Churchstoke ℳ	78	35	66·0	47·3	56·0	− 1·8	98	0	3	0·32	−0·22	31	26
	Hereford ℳ	80	43	66·6	48·1	56·7	− 2·9	103	0	5	0·80	+0·28	*	*
	Cirencester	76	43	64·1	48·4	55·7	− 3·0	96	0	4	0·82	+0·21	22	19
	Oxford	77	45	65·6	48·7	56·6	− 3·0	102	0	5	1·64	+1·09	20	17
5. ENGLAND, S.	London	85	47	68·1	51·1	59·0	− 2·3	119	0	3	0·48	−0·01	28‡	25‡
	Strathfield Turgiss ℳ	78	45	67·3	49·8	57·9	− 1·0	111	0	5	1·32	+0·83	*	*
	Dungeness	75	44	63·1	50·9	56·6	− 3·1	102	0	5	0·52	+0·12	*	*
	Hastings (St. Leonard's)	80	46	66·5	51·7	58·6	− 0·5	116	0	4	1·23	+0·83	36	32
	Southampton	79	46	68·0	52·0	59·4	− 0·3	122	0	5	0·40	−0·08	30	26
	Hurst Castle	73	45	64·9	51·3	57·6	− 1·3	109	0	4	0·72	+0·24	*	*
	Stowell ℳ	77	46	65·5	49·9	57·2	− 1·4	106	0	3	0·63	?	27‡	24‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	80	45	72·5	49·6	60·3	+ 4·7	128	0	0	— †	−1·23	*	*
	Glasgow	71	45	66·1	47·2	56·0	0·0	98	0	0	—	−0·71	77	64
	Ardrossan	75	45	68·6	46·7	56·9	+ 0·6	104	0	0	—	−0·63	*	*
	Glenlee ℌ	81	37	70·7	43·8	56·3	+ 0·8	100	0	0	—	?	*	*
	Douglas (Isle of Man)	77	45	68·2	49·8	58·4	+ 2·2	115	0	3	0·19	−0·35	71	60
7. ENGLAND, N.W.	Newton Reigny (Penrith)	81	35	68·8	41·6	54·3	− 2·1	88	1	0	—	−0·53	74	62
	Barrow-in-Furness	82	44	69·9	51·0	59·8	+ 2·0	125	0	1	0·12	−0·48	*	*
	Stonyhurst	80	41	67·9	46·2	56·3	− 1·0	100	0	2	0·04	−0·81	57	48
	Blackpool ℳ	80	41	69·9	48·1	58·2	0·0	113	0	1	0·13	−0·42	50	42
	Manchester	80	42	66·1	47·2	56·0	− 2·8	98	0	2	0·12	−0·67	*	*
	Liverpool Obsy (Bidston)	82	44	69·9	49·1	58·4	− 0·4	115	0	4	0·35	−0·14	*	*
	Llandudno ℳ													
	Holyhead	78	47	63·7	50·3	56·5	− 1·0	102	0	3	0·33	−0·16	*	*
8. ENGLAND, S.W.	Llandovery	80	43	70·0	51·3	60·0	+ 0·9	126	0	6	0·82	+0·06	*	*
	Pembroke	70	52	63·9	54·0	58·6	+ 0·9	116	0	3	0·41	−0·09	44	38
	Arlington (N. Devon)	76	41	66·1	49·0	57·0	− 1·6	105	0	3	0·48	−0·48	*	*
	Cullompton ℳ	77	40	65·8	49·5	57·1	− 2·2	106	0	3	0·07	−0·53	19	17
	Falmouth	71	47	63·7	50·9	56·9	− 1·9	104	0	3	0·33	−0·35	32	28
	Plymouth	74	49	68·2	53·9	60·5	+ 0·8	130	0	3	0·39	−0·10	36	32
	Prawle Point	71	47	62·9	49·4	55·7	− 1·8	96	0	2	0·17	?	*	*
9. IRELAND, N.	Malin Head	68	48	60·0	51·0	55·2	− 0·5	92	0	0	—	?	*	*
	Londonderry	82	47	74·3	50·9	61·8	+ 5·3	139	0	1	0·02	−0·63	*	*
	Mullaghmore	76	51	68·7	53·7	60·7	+ 2·8	131	0	0	—	−0·77	*	*
	Belmullet	75	50	68·3	54·3	60·8	+ 4·3	132	0	1	0·05	?	*	*
	Markree Castle	75	46	71·0	50·8	60·2	+ 2·2	127	0	0	—	−0·73	73	62
	Brookeborough	76	45	69·5	49·8	59·0	+ 0·8	119	0	0	—	?	*	*
	Armagh	76	44	68·2	48·2	57·5	− 0·7	109	0	1	0·01	−0·52	81	69
	Donaghadee	70	45	65·4	49·1	56·7	− 0·1	103	0	1	0·19	−0·30	*	*
	Edgeworthstown	76	46	68·0	50·4	58·6	+ 1·1	116	0	0	—	−0·80	*	*
10. IRELAND, S.	Dublin	67	50	62·5	52·6	57·2	− 0·8	106	0	2	0·10	−0·37	54	46
	Parsonstown	76	46	68·6	51·0	59·2	+ 1·7	120	0	1	0·01	−0·59	67	57
	Kilkenny	73	47	67·4	51·9	59·1	+ 1·2	120	0	1	0·13	−0·40	*	*
	Waterford	72	45	66·1	51·0	58·0	− 1·3	112	0	3	0·32	−0·28	*	*
	Roche's Point	69	50	63·6	52·1	57·4	− 2·0	108	0	4	0·19	−0·56	*	*
	Valencia	73	48	66·9	53·0	59·5	+ 2·5	123	0	3	0·14	−0·69	48	42
	Killarney	72	44	69·3	48·8	58·3	+ 0·3	114	0	2	0·26	?	*	*
	Foynes	73	47	69·8	52·7	60·7	+ 3·4	131	0	1	0·14	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	65	50	61·0	51·7	56·0	− 2·3	98	0	1	0·28	−0·19	*	*
	Jersey (Noirmont)	78	45	64·3	52·6	58·0	− 1·3	112	0	2	0·55	+0·10	36	32

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ℌ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

NOTE.—The Sunshine Recorder at Glencarron is out of order.

(OFFICIAL COPY.)

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 26.] *Second Series.* WEEK ENDING MONDAY, 2ND JULY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

DISTRICTS. (See p. 104.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
	°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	82	40	60·4	45·9	52·7	1 below.	75	+ 5	0	0	544	− 79	711	+201
1. SCOTLAND, EAST	84	36	62·1	45·5	53·2	3 below.	78	−14	0	0	672	−196	700	+157
2. ENGLAND, N.E.	85	42	58·1	48·1	52·7	5 below.	75	−25	0	0	684	−222	555	+ 73
3. ENGLAND, EAST	80	39	64·7	50·5	56·9	4 below.	104	− 8	0	0	922	−186	661	+154
4. MIDLAND COUNTIES	84	36	64·8	49·4	56·6	3 below.	102	− 8	0	0	910	−226	654	+150
5. ENGLAND, SOUTH	76	41	63·6	52·1	57·4	3 below.	108	−10	0	0	941	−275	577	+204
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	81	34	64·7	49·9	56·8	0 (average).	104	+ 8	0	0	793	−144	505	+107
7. ENGLAND, N.W.	83	34	62·9	50·9	56·5	2 below.	102	0	0	0	806 *	−183	500	+117
8. ENGLAND, S.W.	71	36	63·2	51·1	56·7	3 below.	103	− 6	0	0	923	−259	487	+254
9. IRELAND, NORTH	85	35	62·5	50·6	56·2	2 below.	99	+ 3	0	0	867	−150	417	+ 67
10. IRELAND, SOUTH	72	41	64·6	52·0	57·9	1 below.	111	+ 9	0	0	1055	−141	352	+113
— CHANNEL ISLANDS	68	51	62·5	54·0	58·0	2 below.	112	+ 1	0	0	1057	−216	247	+154

Rainfall. Bright Sunshine.

DISTRICTS. (See p. 104.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
		10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	1	2	6 less.	118	+ 7	18·7	−1·1	45	36	723	+ 28	31	+ 1
1. SCOTLAND, EAST	3	13	7 more.	99	+ 8	14·1	+0·4	39	32	747	− 28	32	− 2
2. ENGLAND, N.E.	4	9	3 more.	92	+ 2	11·0	−0·9	20	17	635	− 56	27	− 3
3. ENGLAND, EAST	5	15	10 more.	93	+ 2	10·5	−0·9	23	20	664	−186	29	− 8
4. MIDLAND COUNTIES	5	13	7 more.	84	− 6	10·8	−2·2	30	26	619	−128	27	− 6
5. ENGLAND, SOUTH	6	14	9 more.	88	+ 2	12·0	−0·5	26	23	635	−153	28	− 7
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	4	13	8 more.	90	−11	20·1	−0·3	46	38	783	+ 53	34	+ 2
7. ENGLAND, N.W.	5	23	16 more.	94	+ 2	11·4	−4·4	31	27	682 *	− 54	30	− 2
8. ENGLAND, S.W.	6	17	11 more.	94	− 4	14·8	−4·7	33	29	781	− 77	34	− 4
9. IRELAND, NORTH	5	23	16 more.	97	−15	17·1 *	+1·0	27	23	685	− 33	30	− 1
10. IRELAND, SOUTH	5	15	8 more.	90	−16	18·0	−0·7	30	26	770	− 37	33	− 2
— CHANNEL ISLANDS	6	11	6 more.	111	+ 5	14·0	−0·7	39	35	865	−150	38	− 7

General Remarks.

Weather has been very unsettled and rainy except in the extreme north of Scotland. Sharp thunderstorms have prevailed in almost all the English districts, and in some localities the rainfall was exceedingly large. At Rothamsted on the 26th, 3·24 ins. of rain fell between 7.30 p.m. and 11.30 p.m.

Temperature has just equalled the mean in "Scotland, W.", but has been below it in all other districts; in "England, E." the deficit was 4°, and in "England, N.E." 5°. The highest of the maxima were recorded generally on the 26th, when the thermometer rose to between 80° and 85° in most parts of the Kingdom, but over the south and south-west of England and the south of Ireland it ranged from 71° to 76°. The lowest of the minima (which were registered during the last few days of the period) were unusually low for the time of year; at most of the inland stations the sheltered thermometer fell to between 34° and 39°.

Rainfall has been considerably less than the mean in "Scotland, N.", but more in all other districts, the excess in most cases being very large; in "Ireland, N." and "Scotland, W." it exceeded an inch and a half.

Bright sunshine has been very little prevalent, the percentage of the possible amount of duration ranging from 17 to 29 over England, from 23 to 26 in Ireland, and from 32 to 38 in Scotland.

Depressions observed.—During this week a well defined but not deep disturbance has passed slowly across our Islands from the Atlantic, and on Saturday was disappearing to the eastward. On Monday a new and more important system was approaching Ireland from the south-westward, and strong South-Westerly winds or moderate gales were setting in at our southern stations and fresh or strong breezes from between South-East and North-East in the north. In addition to these, shallow local (thunderstorm) disturbances have been developed in many places.

* This value has been altered owing to the receipt of further information.

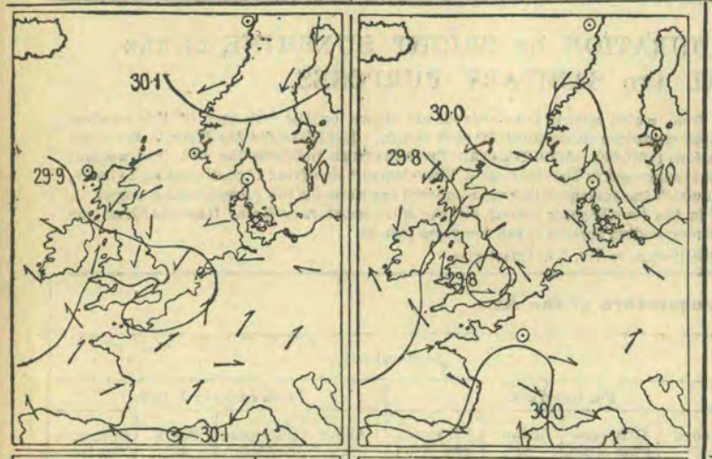
A 54895. 350.—7/88. Wt. 37. E. & S.

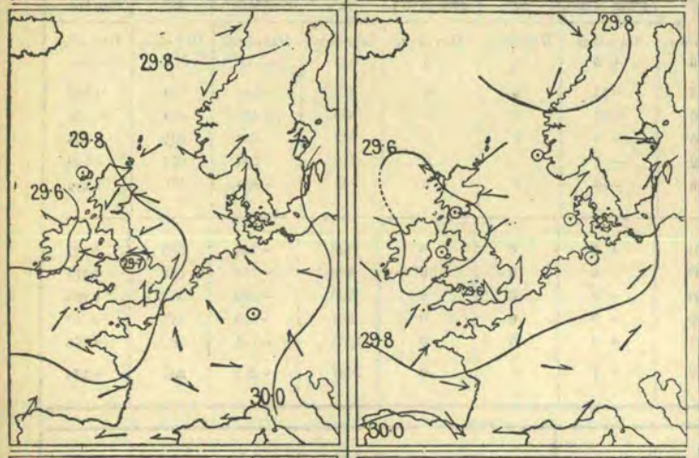
II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

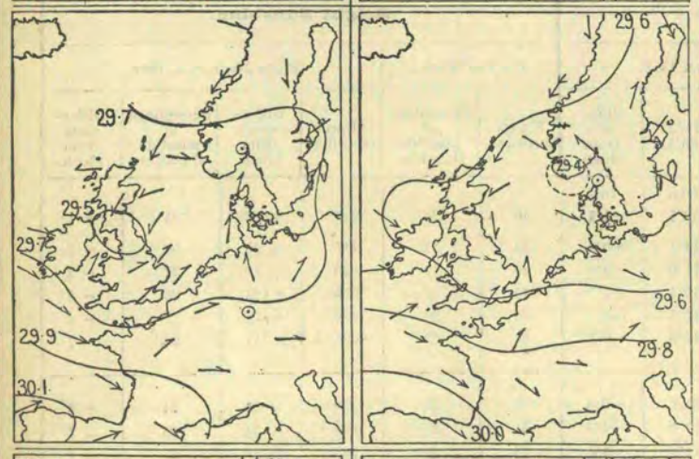
Synoptic Charts.

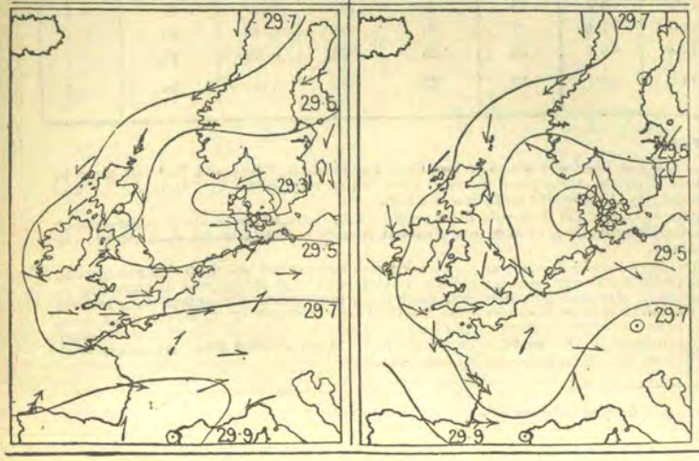
PRESSURE AND WIND.

8 a.m.	6 p.m.









Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Tuesday, June 26.

Weather remaining fine and bright in Scotland and the north of England, dull in Ireland, very unsettled over England, with thunderstorms in some places, mainly in east and south-east of England. Heavy rain, with thunder and lightning in London at night.

Temperature rising in north, falling in south; air close and oppressive. Daily maxima 84° at Nairn, 85° at York, but only 74° in London and 71° at Parsonstown.

Wind very variable; mainly Westerly and South-Westerly in the south, Southerly in Ireland, North-Easterly in the north and north-east of Great Britain, as well as over Scandinavia. The Westerly current giving way again in the north of Spain.

Sea very little disturbed.

Barometer rising slightly over Spain and the south-west of France, falling in our Islands; moderate depression in far west, and very complex "hollow" over England, moving slowly to northwards. Weak anticyclones both in far north and over Spain.

Wednesday, June 27.

Weather remaining fair over the extreme north of our Islands, unsettled and showery elsewhere, but no thunder reported.

Temperature rather low, and giving way unsteadily; maxima 74° at Stornoway and 71° at Liverpool, but below 70° at all other stations in our Islands.

Wind very variable; South-Easterly and Easterly in the north and east, Westerly and North-Westerly elsewhere, and light to moderate in force.

Sea rough about the mouth of the Channel, slight or smooth elsewhere.

Barometer very unsteady; falling in most places, but inclined to rise in the far west. Depression in the north-west undergoing considerable modifications in form, and beginning to move eastwards slowly.

Thursday, June 28.

Weather little changed in our Islands, still very showery and unsettled, with thunderstorms in the south-east, and much fog in the north. Rainfall heavy on the eastern shores of the North Sea, and at Mullaghmore and Liverpool.

Temperature falling; daily maxima below 60° in many places, but reaching 70° at Cambridge and 69° at Loughborough; not exceeding 52° at Wick and 54° at Shields.

Wind North-Easterly at all the northern stations, North-Westerly in Ireland, and Westerly to South-Westerly over England. Moderate gale from North-West over the Bay of Biscay.

Sea rough on our south-western coasts, not much disturbed elsewhere.

Barometer rising very slightly in the north-west, falling slightly elsewhere; depression in the north-west moving slowly to the eastward. Distribution of pressure in region of lowest value undergoing great modifications.

Friday, June 29.

Weather fine in the most northern parts both of Great Britain and Ireland, but showery from time to time elsewhere. Heavy rain and severe thunderstorms on the eastern shores of the North Sea.

Temperature still falling irregularly, most in the north, and becoming very low in some localities at night. Daily maxima below 60° on our north-western coasts, but about 65° or 66° in many other places.

Wind Northerly in the north, Westerly in the south, and South-Westerly over France. Moderate in force at first, but subsequently becoming strong in Scotland, and veering towards north over the British Islands generally.

Sea rough in the north and north-east.

Barometer low generally, but rising in the north and west, and afterwards in the east and south. Depression over the North Sea, and shallow secondary systems over our Islands, all moving eastwards slowly.

Synoptic Charts.

TEMPERATURE AND WEATHER at 8 a.m.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

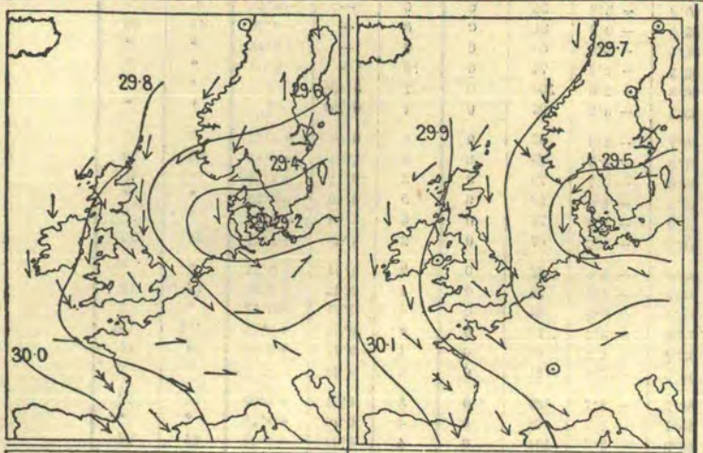
Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Saturday, June 30.

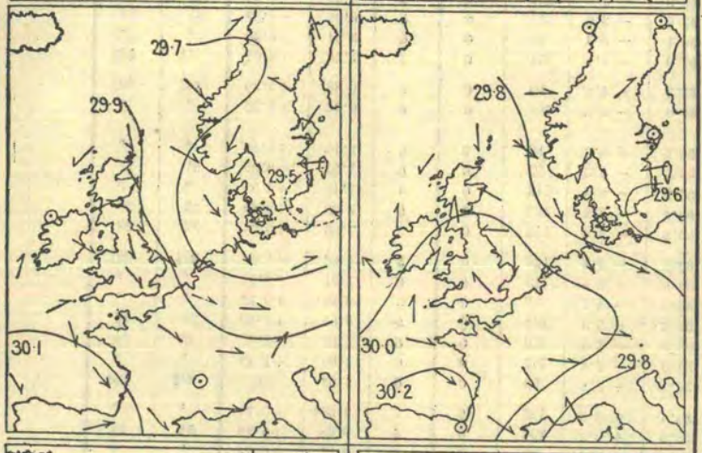
Weather improving decidedly in our Islands, but cold; still very showery on the Continent.

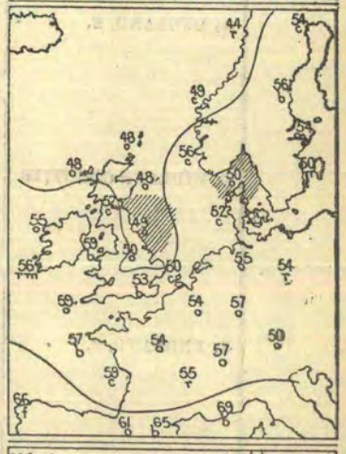
Temperature much below the average; daily maxima below 65° over Great Britain, 66° to 70° in Ireland.

Wind Northerly and North-Westerly, moderate to fresh in force, but falling light towards the end of the day.

Sea rough in the north and north-east, moderate to smooth elsewhere.

Barometer, rising generally. The disturbances recently noticed now passing away towards the Baltic, and subsidiary system disappearing.





Sunday, July 1.

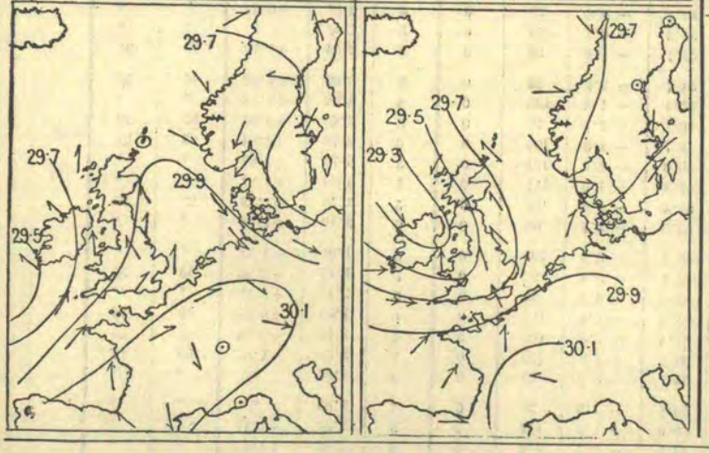
Weather fine and bright over Great Britain, but cold; beginning to break up again in Ireland, where much rain fell and the appearance became threatening.

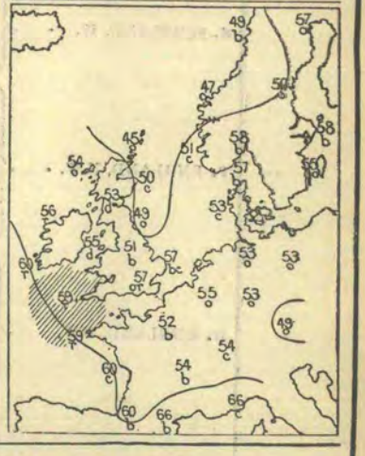
Temperature very low for time of year; inclined to rise in Ireland and same tendency spreading to London by the evening. Daily maxima 60° to 68°.

Wind North-Westerly and Northerly in the north-east and east and of moderate force; very variable and light in the west. Afterwards becoming Southerly and South-Easterly in Ireland, and very variable over England (South-Easterly in London).

Sea rough at first in the north-east; slight elsewhere; subsequently rising in the west.

Barometer falling in west, rising in east. An anti-cyclonic "ridge" passing across our Islands in an easterly direction. New depression appearing in the west.





Monday, July 2.

Weather rainy and unsettled almost everywhere, the extreme north of Scotland alone escaping. Falls heavy in many places.

Temperature, after rising over Great Britain, falling again, and becoming low for the time of year.

Wind South-Easterly and Easterly in the north, South-Westerly to Westerly in the south, and blowing a fresh gale at some of the south-western and southern stations. Subsequently veering to North-West in the north of Ireland.

Sea rough in the south-west.

Barometer falling on all our coasts; rising on eastern shores of North Sea. New and well-marked depression advancing to Ireland from the south-westward; centre reaching Londonderry by six p.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending June 25	Llandudno	77	44	64·4	50·3	56·8	− 1·8	104	0	3	0·19	−0·29	36	31

III.—DATA from which the SUMMARY on page 101 has been calculated.

Districts.	Names of Stations.	Temperature (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	56	40	51·9	42·6	46·9	− 5·8	34	0	0	—	−0·48	*	*
	Stornoway	75	43	61·0	47·1	53·6	− 0·2	81	0	0	—	−0·70	45	36
	Wick	64	45	56·9	46·6	51·4	− 2·8	66	0	0	—	−0·45	*	*
	Lairg	75	41	62·3	43·9	52·5	− 1·2	74	0	?0	?—	−?0·65	*	*
	Glencarron	82	42	66·9	47·0	56·3	+ 2·6	100	0	1	0·43†	?	?	?
	Fort Augustus	81	45	63·3	48·3	55·3	− 0·9	93	0	1	0·70†	?	*	*
1. SCOTLAND, E.	Nairn	84	41	63·9	44·9	53·7	− 2·9	82	0	2	0·80	+0·32	*	*
	Aberdeen	70	44	58·0	46·4	51·8	− 4·9	69	0	3	1·34	+0·85	25	20
	Braemar	77	39	65·6	42·5	53·3	− 0·7	79	0	3	2·11	+1·50	58‡	48‡
	Ochtertyre	78	36	67·0	46·0	55·8	− 1·0	97	0	3	0·59	−0·12	*	*
	Leith	63	42	59·6	47·3	53·0	− 4·8	77	0	3	1·08	+0·59	*	*
	Marchmont	75	40	58·4	45·6	51·6	− 4·2	67	0	2	1·80	+1·11	35	29
2. ENGLAND, N.E.	Alnwick Castle	63	42	54·7	47·6	50·9	− 5·9	62	0	2	1·04	+0·55	*	*
	Durham	71	42	59·3	47·0	52·7	− 5·3	75	0	4	0·84	+0·32	23	18
	Shields	62	44	55·7	47·0	51·1	− 6·6	64	0	4	0·95	+0·47	*	*
	Scarborough	64	42	53·2	48·1	52·8	− 5·4	76	0	6	0·94	+0·34	18‡	15‡
	York	85	42	62·6	48·9	55·3	− 4·2	93	0	4	0·77	+0·19	20	17
	Spurn Head	65	45	58·1	49·7	53·6	− 5·0	81	0	4	0·60	?	*	*
3. ENGLAND, E.	Hillington	80	43	64·5	49·9	56·7	− 2·7	103	0	5	1·61	+1·03	26	22
	Yarmouth	67	45	62·0	51·0	56·1	− 3·8	99	0	4	0·70	+0·18	*	*
	Geldeston	77	39	65·0	49·8	56·9	− 2·6	104	0	4	0·64	+0·20	25	22
	Cambridge	80	46	67·1	49·9	57·9	− 3·8	111	0	5	0·92	+0·37	25	22
	Rothamsted	76	41	64·8	50·5	56·1	− 5·3	99	0	6	3·91	+3·36	*	*
	Ingatestone	74	47	64·7	51·8	57·8	− 4·1	111	0	4	1·15	+0·61	17‡	15‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	82	39	63·7	48·0	55·3	− 4·8	93	0	5	0·82	+0·20	23‡	20‡
	Loughborough	84	40	66·7	49·6	57·6	− 3·5	109	0	6	0·86	+0·32	*	*
	Leicester	78	40	62·3	48·0	54·7	− 4·6	89	0	6	2·16	+1·45	*	*
	Cheadle	75	36	64·1	48·0	55·5	− 3·3	95	0	6	1·51	+0·96	31	27
	Churchstoke	75	41	67·3	50·3	58·2	− 2·3	113	0	4	1·40	+0·88	*	*
	Hereford	71	41	63·9	50·0	56·5	− 3·2	102	0	5	1·29	+0·65	33	29
	Cirencester	75	45	65·7	52·0	58·4	− 2·0	115	0	5	1·23	+0·63	32	28
	Oxford	74	45	66·4	52·7	59·1	− 3·2	120	0	5	1·96	+1·48	29‡	25‡
5. ENGLAND, S.	London	76	41	66·3	51·7	58·5	− 1·4	116	0	6	1·01	+0·51	*	*
	Strathfield Turgiss	63	49	60·7	52·3	55·9	− 4·7	97	0	5	0·52	+0·12	*	*
	Dungeness	63	49	61·5	52·3	56·6	− 3·3	102	0	5	0·81	+0·40	28	25
	Hastings (St. Leonard's)	70	44	65·4	52·7	58·6	− 2·0	116	0	6	1·81	+1·32	27	24
	Southampton	66	44	62·6	52·6	57·3	− 2·4	107	0	6	1·80	+1·32	*	*
	Hurst Castle	66	42	62·6	50·4	56·1	− 3·2	99	0	6	1·62	?	21‡	18‡
	Stowell	80	39	67·5	52·3	59·4	+ 2·8	122	0	2	0·58†	−0·70	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	75	42	66·5	48·6	56·9	+ 0·2	104	0	4	0·98	+0·23	54	45
	Glasgow	80	42	64·1	49·4	56·2	− 0·8	99	0	4	0·97	+0·32	*	*
	Ardrossan	81	34	63·9	48·3	55·6	− 0·7	95	0	5	1·49	?	*	*
	Glenlee	74	43	61·5	50·7	55·7	− 1·0	96	0	5	2·36	+1·77	37	31
	Douglas (Isle of Man)	82	34	63·7	46·9	54·7	− 2·5	89	0	5	0·99	+0·42	39	33
7. ENGLAND, N.W.	Newton Reigny (Penrith)	82	44	62·7	52·3	57·1	− 1·6	106	0	4	1·82	+1·18	*	*
	Barrow-in-Furness	81	41	63·3	49·9	56·1	− 2·1	99	0	6	3·43	+2·51	32	27
	Stonyhurst	83	46	63·3	50·9	56·7	− 2·5	103	0	6	2·75	+1·84	25	21
	Blackpool	82	44	64·3	50·5	56·9	− 2·5	104	0	5	3·70	+2·87	*	*
	Manchester	78	49	63·7	52·7	57·8	− 1·6	111	0	5	1·80	+1·27	*	*
	Liverpool Obsy (Bidston)	73	50	62·2	52·8	57·2	− 2·4	106	0	5	1·70	+1·18	29	25
	Llandudno	67	46	60·3	51·3	55·5	− 2·7	95	0	6	2·10	+1·60	*	*
	Holyhead	71	36	65·6	48·9	56·7	− 3·0	103	0	6	1·91	+1·12	*	*
8. ENGLAND, S.W.	Llandovery	62	48	58·6	52·0	55·1	− 3·8	92	0	5	1·46	+0·96	30	26
	Pembroke	68	40	62·4	49·7	55·6	− 4·2	95	0	6	2·47	+1·47	*	*
	Arlington (N. Devon)	74	42	66·7	51·2	58·3	− 2·1	114	0	6	1·56	+0·95	29	25
	Cullompton	66	50	63·2	52·3	57·4	− 2·3	108	0	4	1·44	+0·76	41	36
	Falmouth	70	49	65·2	53·7	59·1	− 1·6	120	0	6	2·18	+1·67	30	27
	Plymouth	64	46	60·4	49·7	54·7	− 3·8	89	0	6	1·07	?	*	*
	Prawle Point	65	48	58·7	51·4	54·8	− 1·3	90	0	5	1·35	?	*	*
9. IRELAND, N.	Malin Head	85	40	67·3	51·8	59·0	+ 1·5	119	0	5	1·86	+1·17	*	*
	Londonderry	72	42	61·6	52·6	56·8	− 2·1	104	0	4	2·62	+1·82	*	*
	Mullaghmore	70	47	60·7	53·0	56·6	− 0·3	102	0	5	1·42	?	*	*
	Belmullet	71	35	63·1	49·4	55·8	− 3·2	97	0	5	2·42	+1·69	24	20
	Markree Castle	78	37	64·0	49·2	56·1	− 3·0	99	0	5	3·51	?	*	*
	Brookeborough	76	39	63·5	49·4	56·0	− 2·9	98	0	5	3·53	+2·93	29	25
	Armagh	71	47	59·7	49·9	54·5	− 2·9	88	0	6	1·65	+1·15	*	*
	Donaghadee	71	39	63·9	49·0	55·9	− 2·8	97	0	5	2·19	+1·38	*	*
	Edgeworthstown	72	47	64·5	51·7	57·7	− 1·2	110	0	6	1·87	+1·39	35	30
10. IRELAND, S.	Dublin	71	41	66·1	51·1	58·1	− 0·3	113	0	6	1·09	+0·47	21	18
	Parsonstown	68	44	65·6	51·6	58·1	− 0·8	113	0	6	1·46	+0·94	*	*
	Kilkenny	68	41	66·4	51·3	58·3	− 1·5	114	0	6	1·81	+1·20	*	*
	Waterford	69	51	64·0	53·9	58·6	− 0·3	116	0	4	2·46	+1·73	*	*
	Roche's Point	64	48	62·1	53·6	57·6	− 1·3	109	0	6	1·15	+0·28	34	30
	Valencia	?69	43	63·8	50·6	56·7	− 2·2	103	0	3	0·75	?	*	*
	Killarney	68	45	64·6	52·4	58·0	− 0·1	112	0	5	1·28	?	*	*
	Foynes	66	51	62·3	54·0	57·9	− 1·5	111	0	5	1·42	+0·94	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	68	52	62·6	53·9	58·0	− 2·3	112	0	6	0·74	+0·27	39	35
	Jersey (Noirmont)													

Stations marked ⚓ are in connection with the Royal Meteorological Society, and those marked ⚓ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

NOTE.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 27.] *Second Series.*

WEEK ENDING MONDAY, 9TH JULY, 1888.

[*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

DISTRICTS. (See p. 108.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
	°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	65	32	55·8	43·0	49·0	6 below.	49	−27	0	0	593	−115	711	+201
1. SCOTLAND, EAST	66	37	57·4	45·1	50·8	6 below.	62	−36	0	0	734	−243	700	+157
2. ENGLAND, N.E.	67	38	59·3	47·6	53·0	6 below.	77	−30	0	0	761	−264	555	+ 73
3. ENGLAND, EAST	70	39	63·5	50·2	53·4	5 below.	101	−17	0	0	1023	−212	661	+154
4. MIDLAND COUNTIES	71	40	62·3	48·8	55·2	5 below.	92	−25	0	0	1002	−257	654	+150
5. ENGLAND, SOUTH	68	45	62·9	52·1	57·2	4 below.	106	−18	0	0	1047	−296	577	+204
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	63	41	58·3	48·0	52·8	4 below.	76	−25	0	0	869	−176	505	+107
7. ENGLAND, N.W.	66	30	59·8	49·7	54·4	5 below.	87	−21	0	0	893	−210	500	+117
8. ENGLAND, S.W.	71	42	63·0	51·6	56·9	3 below.	104	−10	0	0	1027	−272	487	+254
9. IRELAND, NORTH	68	34	59·8	49·3	54·3	4 below.	86	−14	0	0	953	−173	417	+ 67
10. IRELAND, SOUTH	68	40	63·0	50·3	56·2	3 below.	99	− 9	0	0	1154	−156	352	+113
— CHANNEL ISLANDS	66	51	63·2	54·0	58·3	2 below.	114	− 3	0	0	1171	−223	247	+154

Rainfall.

DISTRICTS. (See p. 108.)	For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.
		10ths of In.				Ins.	Ins.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	4	6	1 less.	122	+ 6	19·3	−1·2
1. SCOTLAND, EAST	5	5	1 less.	104	+ 8	14·6	+0·3
2. ENGLAND, N.E.	3	7	1 more.	95	+ 2	11·7	−0·8
3. ENGLAND, EAST	5	9	4 more.	98	+ 3	11·4	−0·6
4. MIDLAND COUNTIES	5	6	0 (average).	80	− 5	11·4	−2·2
5. ENGLAND, SOUTH	4	11	6 more.	92	+ 2	13·1	+0·1
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	4	5	2 less.	94	−12	20·6	−5·0
7. ENGLAND, N.W.	4	5	2 less.	98	+ 1	11·9	−4·6
8. ENGLAND, S.W.	5	9	2 more.	99	− 4	15·8 *	−4·4
9. IRELAND, NORTH	4	3	4 less.	101	−16	17·4	+0·6
10. IRELAND, SOUTH	4	8	1 more.	94	−17	18·8	−0·6
— CHANNEL ISLANDS	4	7	2 more.	115	+ 4	14·7	−0·5

Bright Sunshine.

DISTRICTS. (See p. 108.)	For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	43	35	766	+ 38	31	+ 1
1. SCOTLAND, EAST	18	15	765	− 44	31	− 2
2. ENGLAND, N.E.	20	17	655	− 78	27	− 3
3. ENGLAND, EAST	26	23	690	−215	29	− 9
4. MIDLAND COUNTIES	21	18	649	−155	26	− 7
5. ENGLAND, SOUTH	22	20	657	−185	27	− 8
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	19	16	892	+ 37	33	+ 1
7. ENGLAND, N.W.	20	17	702	− 73	29	− 3
8. ENGLAND, S.W.	37	33	818	− 87	34	− 4
9. IRELAND, NORTH	22	18	707	− 34	29	− 2
10. IRELAND, SOUTH	32	28	892	− 32	33	− 2
— CHANNEL ISLANDS	40	33	905	−162	38	− 6

General Remarks.

Weather has continued in an unsettled and most unseasonable condition in all parts of the Kingdom. Thunder and lightning have been of frequent occurrence in most parts of England and at some of the Irish stations, and the falls of rain at times very heavy. In the south of London, on the 6th, an inch of rain fell in the short space of half an hour.

Temperature has again been below the mean, the deficit in most districts varying from 4° to 6°. The highest of the maxima, which were recorded on somewhat irregular dates, ranged from 63° in "Scotland, W." to 71° in the "Midland Counties" and "England, S.W." The lowest of the minima were generally registered towards the close of the week, when the th rmometer fell to 32° in "Scotland, N.", 34° in "Ireland, N.", and to between 37° and 42° in most other districts. At Newton Reigny (in "England, N.W.") the minimum on the 9th is reported to have been as low as 30°.

Rainfall has been rather less than the mean in Scotland as well as in the north-west of England and north of Ireland, but in most other parts of the Kingdom an excess is shown, especially in the east and south of England.

Bright sunshine has continued very deficient generally, the percentage of the possible amount of duration in most districts varying from 15 to 28. In "Scotland, N." the percentage was 35 and in the "Channel Islands" 36.

Depressions observed.—During the earlier days of the period the important depression noted in last week's report moved slowly away to the north eastward and became less deep. It was followed by an irregularly shaped shallow system which advanced over Ireland from the westward, and gradually spreading over England, dispersed over our southern counties and the Channel. Towards the end of the week a well-defined and rather deep depression appeared off our northern coasts and moved in a south-easterly direction over the North Sea, some subsidiary disturbances also appearing over our eastern districts. In the rear of this disturbance a moderate to fresh gale from the north-westward was experienced over Scotland.

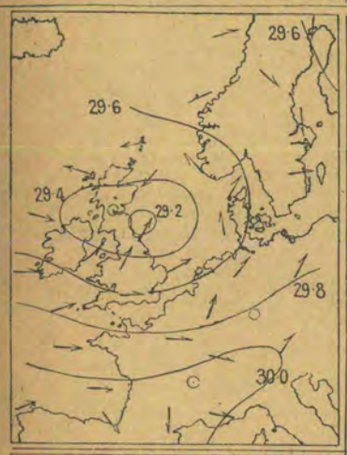
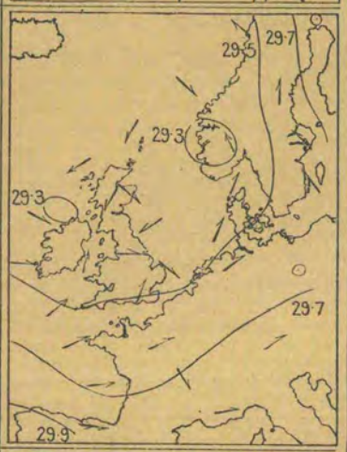
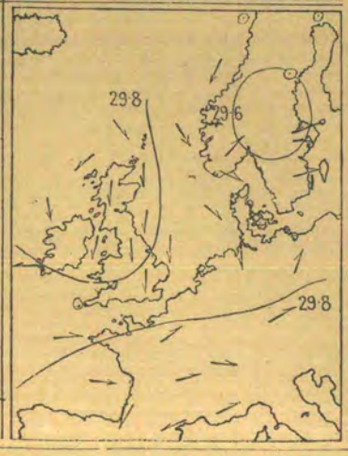
* This value has been altered owing to the receipt of further information.

A 54973. 350. 7/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

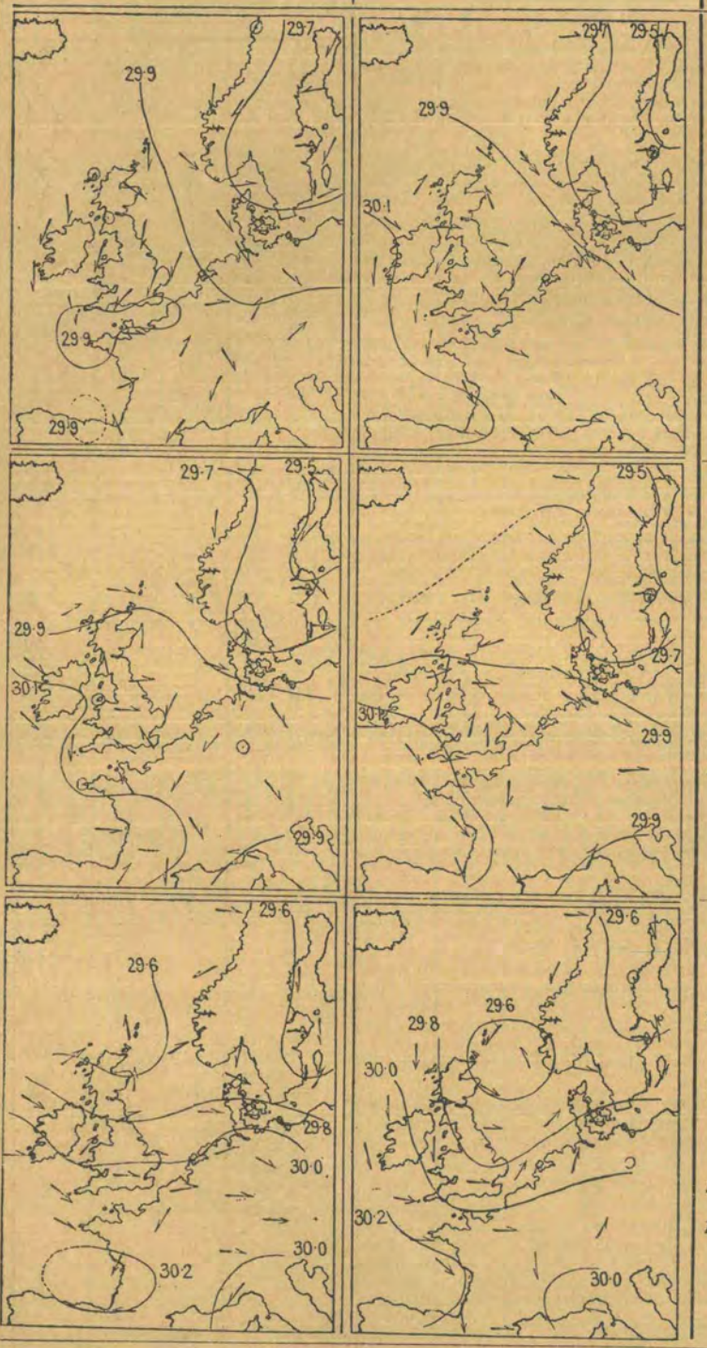
8 a.m.	6 p.m.	Weather during the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. TEMPERATURE AND WEATHER at 8 a.m.
		**Tuesday, July 3.** *Weather* cloudy and unsettled in most districts, with rain in many parts of our Islands and also in Denmark and North Germany. Thunderstorm experienced at Holyhead in the morning and at Wick during the ensuing night. *Temperature* fallen a little in Scotland, but risen elsewhere. Maximum readings exceeding 65° over Central England, but below 55° at many of the Scotch stations. *Wind* Easterly in Scotland and Norway, but South-Westerly or Westerly elsewhere; strong in force in most parts of the United Kingdom and France during the early part of the day, but moderating later. *Sea* rough on all but our east coasts. *Barometer* rising a little at our western stations, but falling elsewhere. Pressure high in Spain, and relatively high off the north-west of Norway, with centre of large and rather deep depression off the Northumberland coast. Depression subsequently moving eastwards, but new fall of barometer setting in on our south-west coasts.	
		**Wednesday, July 4.** *Weather* cloudy and showery in most parts of our Islands; rainy in Belgium and Germany. Thunder and lightning occurring during the day in many places. *Temperature* changed little and irregularly. Maxima again exceeding 65° over Central England (70° at Cambridge), but not reaching 60° in Scotland. *Wind* Southerly in Sweden and North-Easterly in Norway and the north of Scotland, but Westerly or South-Westerly elsewhere; light or moderate in force in most places. *Sea* rather rough at some of our southern and extreme northern stations, but moderate or slight elsewhere. *Barometer* falling generally. Pressure still highest in Spain, but relatively high over Northern Europe. Depression of previous day now moving north-eastwards across the North Sea, but new disturbance appearing off the north of Ireland. Slight rise taking place in north later.	
		Thursday, July 5. *Weather* still cloudy generally, with showers in most places. Thunder occurring later at many of our stations. *Temperature* fallen a little in our Islands, but risen at most of the Continental stations. Maxima exceeding 65° over Central England, but below 55° in the north of Scotland. *Wind* South-Easterly in Scandinavia and North-Easterly over the northern parts of our Islands, but South-Westerly elsewhere; light or moderate in force in most places. *Sea* rather rough at Stornoway, but moderate to smooth elsewhere. *Barometer* rising at all but the Scandinavian and Danish stations. Pressure still highest in Spain and relatively high in Finland, with large shallow depressions over Ireland and Norway. Irish disturbance subsequently moving slowly south-eastward and partially filling up.	
		**Friday, July 6.** *Weather* cloudy and unsettled generally, with rain in many places, and mist or fog locally. Some improvement taking place in north later, but thunderstorms occurring at many of the English and French stations; storm very severe in south of London, and also at Babbacombe, where exceedingly heavy falls of rain or hail occurred. *Temperature* fallen generally. Maxima below 65° at all but our extreme south-western stations, below 60° in the northern and eastern parts of the Kingdom generally, and below 55° on our north-east coasts. *Wind* moderate North-Easterly over all the more northern parts of our Islands, but South-Westerly over France, Germany, and the English Channel, and South-Easterly in Sweden. *Sea* moderate to smooth. *Barometer* rising generally. Pressure still highest in Spain, with a large shallow depression over Norway and Denmark, and small disturbances off our south-east and south-west coasts. Former system subsequently moving away eastwards, and latter disturbances partially dispersing.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, July 7.

Weather fine in the west and north of our Islands, but cloudy elsewhere; with rain in the west of Norway, the south of Sweden, and the south-west of France. Improvement taking place later at our eastern and southern stations.

Temperature risen a little in Germany and the north of our Islands, but fallen in most other localities; maximum readings below 60° at most of our northern and eastern stations.

Wind light Northerly or North-Easterly in our Islands, but North-Westerly on the eastern shores of the North Sea and variable in France. Subsequently shifting to the South-Westward in the north of Scotland.

Sea slight or smooth generally.

Barometer rising at all but the Swedish stations. Pressure was highest over Portugal and the west of Ireland, with a large shallow area of low readings over Finland and the south of Sweden, and a smaller area over the English Channel. Slight fall taking place in Hebrides later.

Sunday, July 8.

Weather fair generally, but dull at most of the Channel stations, with rain at Hurst Castle. Rain falling later on our extreme north and north-west coasts, and thunder heard at some of our western stations.

Temperature risen over the northern, eastern, and central parts of our Islands, but fallen elsewhere. Maxima exceeding 60° on all but our extreme north and north-west coasts, and exceeding 65° in some parts of England.

Wind light South-Westerly on our northern coasts and North-Westerly in the South-West, but variable at our south-eastern and the French stations.

Sea slight or smooth generally.

Barometer falling in Scotland and the greater part of Scandinavia, but rising elsewhere. Large area of high readings extending from Spain to the south of Ireland, with shallow depressions over Finland and Sweden. New disturbances approaching our northern coasts later, and barometer falling in most parts of our Islands.

Monday, July 9.

Weather fine in Denmark, the Netherlands, France, and the south-east of England, but cloudy elsewhere, with showers at several of our western and northern stations. Showers falling generally later.

Temperature changed irregularly. Maxima a little above 65° over the inland parts of Great Britain, but below 60° at several of our western and extreme northern stations.

Wind moderate or fresh from the Westward or South-Westward generally, but Northerly in Scandinavia and France. Subsequently veering to North-West or North on our northern coasts, and increasing to a moderate or fresh gale.

Sea rather rough at Stornoway, but slight or smooth elsewhere.

Barometer falling at all but the French stations. Anticyclone lying over the Bay of Biscay, with small depression off the north of Scotland. Depression subsequently moving away in an east-south-easterly direction, and barometer rising again in Ireland and Scotland.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	56	37	53·0	43·1	47·7	− 5·5	40	0	3	0·77	+0·29	*	*
	Stornoway	58	32	54·9	42·3	48·2	− 6·0	43	0	3	0·27	−0·43	43	35
	Wick	60	36	56·4	43·9	49·7	− 5·0	54	0	4	0·58	+0·10	*	*
	Lairg ℳ	65	33	58·6	40·6	49·0	− 5·3	55	4	3	0·43	−0·27	*	*
	Glencarron ℳ	61	37	54·8	43·1	48·5	− 5·7	46	0	5	0·97†	?	?	?
	Fort Augustus ℳ	63	41	57·2	?45·0	50·7	− 6·2	61	0	4	0·33†	?	*	*
1. SCOTLAND, E.	Nairn	63	40	58·3	45·9	51·7	− 5·5	68	0	4	0·47	−0·03	*	*
	Aberdeen	65	41	56·4	46·4	51·1	− 6·0	64	0	4	0·99	+0·47	24	20
	Braemar ℳ	59	37	55·7	41·9	48·3	− 6·2	45	0	5	0·40	−0·22	12‡	10‡
	Ochtertyre ℳ	66	38	59·9	45·7	52·3	− 5·1	72	0	6	0·57	−0·16	*	*
	Leith	66	42	57·3	47·6	52·1	− 6·5	71	0	4	0·29	−0·28	*	*
	Marchmont ℳ	64	39	56·7	42·9	49·3	− 7·0	51	0	4	0·29	−0·45	19	16
2. ENGLAND, N.E.	Alnwick Castle	64	39	56·9	46·3	51·1	− 6·4	64	0	3	0·20	−0·33	*	*
	Durham	67	38	60·2	46·1	52·7	− 5·8	75	0	3	1·13	+0·56	19	16
	Shields	65	41	58·4	46·4	52·0	− 6·2	70	0	4	0·49	−0·02	*	*
	Scarborough ℳ	65	42	58·6	48·2	53·5	− 5·5	81	0	2	0·97	+0·37	17‡	15‡
	York	67	41	61·3	48·0	54·2	− 6·3	85	0	3	0·17	−0·41	23	20
	Spurn Head	64	48	59·3	50·4	54·5	− 5·0	88	0	4	0·94	?	*	*
3. ENGLAND, E.	Hillington ℳ	69	42	63·9	49·4	56·2	− 4·1	99	0	4	2·03	+1·43	20	17
	Yarmouth	67	44	61·9	51·6	56·4	− 4·3	101	0	5	0·73	+0·18	*	*
	Geldeston	68	39	63·2	50·0	56·1	− 4·3	99	0	5	1·07	+0·59	26	23
	Cambridge	70	43	65·9	49·6	57·2	− 5·2	106	0	6	1·00	+0·47	31	27
	Rothamsted	66	47	63·0	50·5	56·3	− 5·6	100	0	3	0·25	−0·33	*	*
	Ingatestone	68	48	63·3	50·3	56·4	− 6·0	101	0	4	0·45	−0·10	28‡	25‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	68	44	62·6	48·3	55·0	− 5·9	91	0	4	0·36	−0·26	19‡	16‡
	Loughborough	68	47	63·9	49·9	56·4	− 5·4	101	0	2	0·62	+0·09	*	*
	Leicester													
	Cheadle ℳ	65	45	60·5	48·7	54·2	− 5·7	85	0	?	[illegible]	?	*	*
	Churchstoke ℳ	67	40	61·5	46·7	53·6	− 5·8	81	0	6	1·12	+0·56	20	17
	Hereford ℳ	71	43	64·1	49·9	56·5	− 4·9	102	0	5	0·55	+0·03	*	*
	Cirencester	65	44	61·4	47·9	54·2	− 6·2	85	0	6	0·47	−0·19	21	18
	Oxford	65	47	62·1	50·6	56·8	− 4·2	104	0	5	0·24	−0·32	23	20
5. ENGLAND, S.	London	68	50	64·7	51·9	57·9	− 5·1	111	0	5	1·65	+1·16	25‡	22‡
	Strathfield Turgiss ℳ	68	47	64·4	51·5	57·5	− 3·2	109	0	5	1·63	+1·13	*	*
	Dungeness	64	47	61·9	52·6	56·9	− 4·5	104	0	3	0·26	−0·14	*	*
	Hastings (St. Leonard's)	63	49	61·1	52·3	56·4	− 4·8	101	0	3	0·21	−0·20	28	25
	Southampton	66	46	64·7	52·2	58·0	− 3·6	112	0	3	1·48	+0·97	31	27
	Hurst Castle	65	50	61·6	53·4	57·2	− 4·0	106	0	4	0·47	−0·02	*	*
	Stowell ℳ	64	45	61·6	50·5	56·7	− 3·4	103	0	7	1·75	?	5‡	4‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	60	41	57·9	45·7	51·4	− 5·4	66	0	5	0·55†	−0·78	*	*
	Glasgow	61	42	57·6	47·4	52·1	− 5·3	71	0	4	0·56	−0·22	12	10
	Ardrossan	63	47	57·4	48·9	52·9	− 4·7	76	0	3	0·21	−0·44	*	*
	Glenlee ℳ	63	43	58·7	48·6	53·3	− 3·4	79	0	6	0·46	?	*	*
	Douglas (Isle of Man)	62	42	59·8	49·2	54·1	− 2·9	85	0	4	0·52	−0·09	26	22
7. ENGLAND, N.W.	Newton Reigny (Penrith)	63	30	58·7	41·8	49·7	− 8·2	55	1	3	0·15	−0·47	18	15
	Barrow-in-Furness	59	46	58·3	51·1	54·5	− 4·3	88	0	4	0·98	+0·31	*	*
	Stonyhurst	62	45	59·5	49·4	54·1	− 4·6	85	0	4	0·50	−0·47	21	18
	Blackpool ℳ	62	46	59·0	50·8	54·6	− 5·0	88	0	3	0·25	−0·43	19	16
	Manchester	65	47	61·7	50·6	55·8	− 4·1	97	0	6	0·93	+0·07	*	*
	Liverpool Obsy (Bidston)	66	48	60·4	51·1	55·4	− 4·9	94	0	5	0·56	−0·04	*	*
	Llandudno ℳ	64	47	60·5	51·0	55·4	− 4·8	94	0	5	0·17	−0·42	20	17
	Holyhead	63	49	60·3	51·4	55·5	− 3·2	95	0	4	0·17	−0·33	*	*
8. ENGLAND, S.W.	Llandovery	68	44	64·1	50·0	56·6	− 3·7	102	0	7	0·99	+0·18	*	*
	Pembroke	60	49	58·4	53·1	55·6	− 3·8	95	0	1	0·35	−0·16	38	33
	Arlington (N. Devon)	65	48	61·9	50·6	55·9	− 4·6	97	0	6	1·83	+0·81	*	*
	Cullompton ℳ	68	42	65·0	50·2	57·1	− 4·2	105	0	6	1·65	+1·03	18	16
	Falmouth	66	51	63·4	52·7	57·7	− 2·6	110	0	6	0·43	−0·26	48	43
	Plymouth	71	51	67·1	53·8	60·0	− 1·5	126	0	3	0·59	+0·05	45	40
	Prawle Point	64	48	61·0	51·1	55·7	− 3·7	96	0	3	0·10	?	*	*
9. IRELAND, N.	Malin Head	58	47	53·6	49·9	52·6	− 3·9	74	0	5	0·52	?	*	*
	Londonderry	64	42	61·0	49·0	54·6	− 3·4	88	0	5	0·37	−0·36	*	*
	Mullaghmore	60	42	59·3	50·9	54·8	− 4·4	90	0	4	0·42	−0·42	*	*
	Belmullet	67	48	59·3	51·9	55·3	− 2·0	93	0	5	0·48	?	*	*
	Markree Castle	61	34	59·5	47·7	53·2	− 6·2	78	0	3	0·15	−0·59	18	15
	Brookeborough	68	35	60·9	47·5	53·7	− 5·9	82	0	4	0·13	?	*	*
	Armagh	66	40	61·5	48·2	54·4	− 5·0	87	0	2	0·06	−0·59	25	21
	Donaghadee	65	47	61·0	50·9	55·6	− 2·3	95	0	4	0·41	−0·12	*	*
	Edgeworthstown	64	44	61·3	47·9	54·2	− 5·2	85	0	3	0·26	−0·56	*	*
10. IRELAND, S.	Dublin	68	47	62·7	51·3	56·6	− 3·1	102	0	3	0·44	−0·06	33	28
	Parsonstown	65	44	62·9	49·6	55·8	− 3·1	97	0	4	0·34	−0·31	35	30
	Kilkenny	67	42	63·3	48·9	55·6	− 3·9	95	0	3	0·50	−0·03	*	*
	Waterford	68	42	65·9	48·9	56·8	− 3·5	104	0	2	0·43	−0·19	*	*
	Roche's Point	64	48	62·3	51·6	56·6	− 4·0	102	0	4	1·37	+0·64	*	*
	Valencia	67	48	62·4	52·3	57·0	− 1·5	105	0	5	1·07	+0·19	29	25
	Killarney	65	40	62·0	49·1	55·1	− 4·2	92	0	5	0·82	?	*	*
	Foynes	65	47	62·3	50·5	56·0	− 3·8	98	0	6	1·22	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	66	52	63·0	53·7	58·0	− 2·0	112	0	4	0·33	−0·16	*	*
	Jersey (Noirmont)	66	51	63·3	54·3	58·5	− 2·5	116	0	3	0·98	+0·49	40	36

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

Note.—The Sunshine Recorder at Glencarron is out of order.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 28.] *Second Series.* WEEK ENDING MONDAY, 16TH JULY, 1883. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 112.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	72	39	56·7	45·8	50·9	4 below.	62	−21	0	0	655	−140	711	+201
	1. SCOTLAND, EAST	72	40	60·0	47·7	53·4	4 below.	80	−24	0	0	814	−271	700	+157
	2. ENGLAND, N.E.	67	39	57·5	46·9	51·8	8 below.	69	−45	0	0	830	−315	555	+ 73
	3. ENGLAND, EAST	69	38	61·4	48·5	54·5	7 below.	88	−37	0	0	1111	−253	661	+154
	4. MIDLAND COUNTIES	74	38	61·9	46·9	53·9	7 below.	83	−39	0	0	1085	−295	654	+150
	5. ENGLAND, SOUTH	73	39	62·8	49·1	55·5	6 below.	95	−35	0	0	1143 †	−331	577	+204
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	66	39	59·2	48·8	53·6	4 below.	81	−24	0	0	950	−202	505	+107
	7. ENGLAND, N.W.	65	37 *	59·5	49·0	53·9	6 below.	83	−29	0	0	977 †	−238	500	+117
	8. ENGLAND, S.W.	71	35	62·6	49·1	55·4	5 below.	94	−25	0	0	1121	−293	487	+254
	9. IRELAND, NORTH	69	40	59·3	49·0	53·8	5 below.	83	−21	0	0	1036	−193	417	+ 67
	10. IRELAND, SOUTH	69	36	63·1	48·8	55·4	4 below.	94	−19	0	0	1248	−172	352	+113
	— CHANNEL ISLANDS	69	47	61·3	52·3	56·5	5 below.	102	−21	0	0	1273	−243	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 112.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	5	6	1 less.	127	+ 7	19·9	−1·3	32	26	798	+ 39	31	+ 1
	1. SCOTLAND, EAST	6	14	7 more.	110	+10	16·0	+1·0	20	17	785	− 68	31	− 3
	2. ENGLAND, N.E.	6	16	10 more.	101	+ 4	13·3	+0·2	9	8	664	−118	26	− 5
	3. ENGLAND, EAST	5	9	3 more.	103	+ 4	12·3	−0·3	15	13	705	−231	28	−10
	4. MIDLAND COUNTIES	5	13	7 more.	94	− 4	12·7	−1·5	18	16	658	−181	26	− 7
	5. ENGLAND, SOUTH	4	5	1 more.	96	+ 2	13·6	+0·1	25	22	682	−210	27	− 9
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	5	11	4 more.	99	−12	21·7	−0·1‡	25	22	827	+ 22	32	0
	7. ENGLAND, N.W.	4	12	5 more.	102	+ 1	13·1	−4·1	17	15	719	−100	28	− 4
	8. ENGLAND, S.W.	4	10	2 more.	103	− 4	16·8	−4·1	35	32	853	−102	34	− 4
	9. IRELAND, NORTH	4	5	2 less.	105	−17	17·9	+0·3	13	12	720	− 56	28	− 2
	10. IRELAND, SOUTH	2	2	4 less.	96	−20	19·0	−1·0	26	23	828	− 45	33	− 1
	— CHANNEL ISLANDS	3	7	2 more.	118	+ 3	15·4	−0·3	57	52	932	−163	38	− 7

General Remarks.

Weather has again been dull, gloomy, and rainy over nearly the whole Kingdom. Slight snow fell in different parts of the country during the early morning of the 11th, and was even observed as far south as the Isle of Wight. Towards the end of the period thunder and lightning were experienced at some of our southern stations.

Temperature has continued below the mean in all districts, the deficit being as much as 6° to 8° over the greater part of England, and 4° or 5° over Ireland and Scotland. Soon after the commencement of the week it became abnormally low for the time of year, the maximum reading in London on the 11th and 12th not exceeding 54°; as the week advanced, however, the thermometer rose, and maximum between 71° and 74° were prevalent over south-western, southern, and central England. The absolute minima, which were recorded on rather irregular dates, were also very low, ranging from 35° in "England, S.W." and 36° in "Ireland, S." to 40° in "Scotland, E." and "Ireland, N.", and 47° in the "Channel Islands." During the night of the 12th—13th, the thermometer on the grass fell to 29° at Hillingdon, to 31° at Cullompton, and to 32° at Strathfield Turgiss.

Rainfall has been less than the mean in Ireland and the extreme north of Scotland, but more in all other districts, especially over the eastern and central parts of Great Britain.

Bright sunshine has again been very deficient generally. In "England, N.E." the percentage of the possible amount of duration was only 8, and in most other districts it varied between 12 and 23. In "England, S.W.", however, 32 % was recorded, and in the "Channel Islands" 52 %.

Depressions observed.—At the commencement of the period a rather deep depression which had previously moved in an east-south-easterly direction over the North Sea lay over the north of Denmark; it subsequently moved slowly away to the eastward and partially filled up. On the 11th, the centre of a small well-defined disturbance had appeared over the southern part of the North Sea, but on this dispersing, the barometer rose over our Islands, and no depressions were shown until towards the end of the period, when a shallow low pressure system appeared over the Bay of Biscay and advanced northward over Ireland and the southern parts of England. During the earlier days of the period fresh or strong winds from the Northward were very general over the United Kingdom, but afterwards light and somewhat variable breezes became prevalent.

* The corresponding value in last week's Report should read "35" and not "30". The minimum on the 9th at Newton Reigny was no lower than 48 and not "30°" as stated in the "General Remarks". See erratum on p. 112.

† This value has been altered owing to the receipt of further information.

‡ The corresponding value in last week's Report should read "−0·5" and not "−5·0."

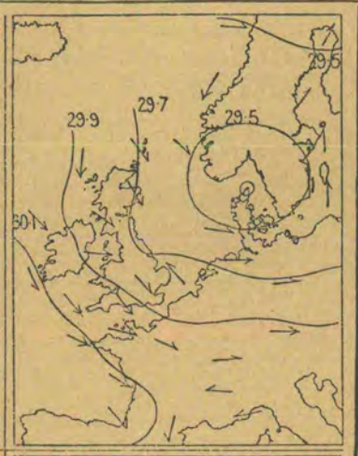
A 55042. 350.—7/83. Wt. 37. E. & S.

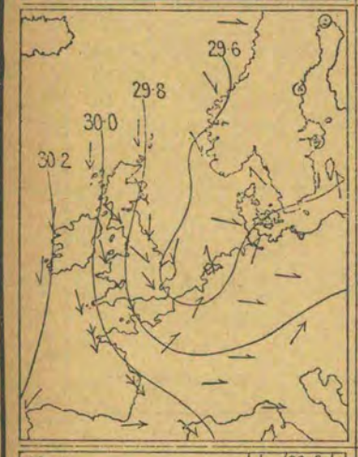
II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

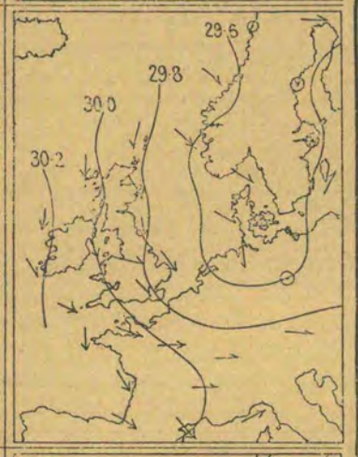
Synoptic Charts.

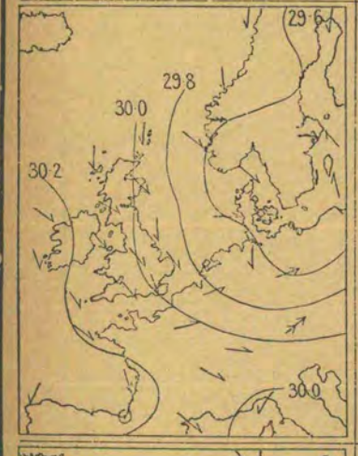
PRESSURE AND WIND.

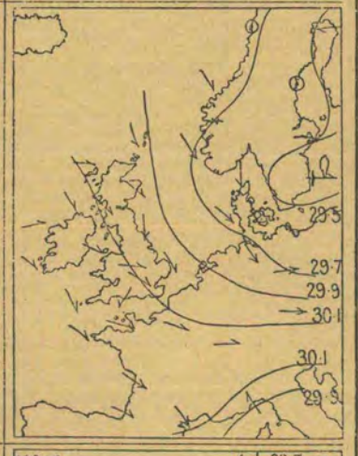
8 a.m. | **6 p.m.**

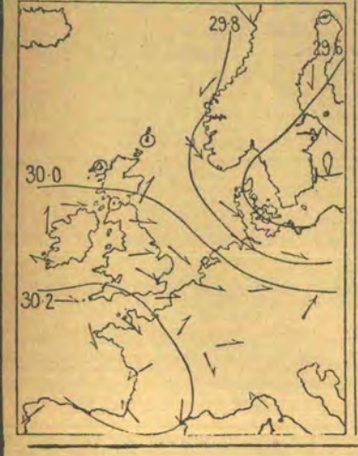


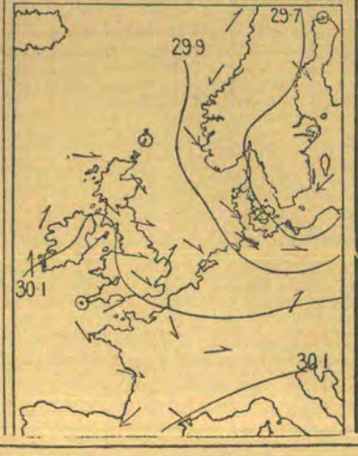












Weather

During the 24 hours succeeding

8 a.m. on the dates given.

Tuesday, July 10.

Weather fine in South Germany as well as in many parts of Great Britain and France, but cloudy elsewhere, with rain at Wick and Rochefort. Rain extending later from the northward to all but our extreme southern stations.

Temperature fallen a few degrees in our Islands, but changed irregularly elsewhere. Maxima below 60° at all our more north-western, northern, and eastern stations.

Wind North-Westerly in our Islands and France, but Westerly in Denmark and Germany; moderate or fresh in force in most places. Subsequently veering to the Northward in the north of Scotland.

Sea rather rough in the Irish Sea, but moderate to smooth elsewhere.

Barometer rising over the greater part of our Islands, but falling at the Continental stations. Anticyclone extending from the Bay of Biscay to the south-west of Ireland, with a large depression over Denmark and the south of Norway. Secondary disturbances forming over our Islands later, and barometer falling generally.

Wednesday, July 11.

Weather fair in the west of our Islands as well as in Denmark and the south of Norway, but cloudy elsewhere, with rain over England. Slight snow falling during the day in many parts of Great Britain.

Temperature fallen generally; 8 a.m. readings as low as 44° in London and at Oxford, and 45° at Cambridge. Maxima below 60° generally, and below 55° in many parts of our midland, eastern, and south-eastern counties.

Wind strong from North or North-West over the United Kingdom and west of France, but moderate from South-West over the Netherlands and Germany, and variable in Scandinavia.

Sea rather rough on all the more exposed parts of our coasts.

Barometer rising in Scandinavia, Denmark, and the west and north of our Islands, but falling elsewhere. Depression of previous day now lying over Skager Rack, with well-defined and rather deep secondary disturbances off the Norfolk coast. Both systems moving eastwards later, and barometer rising in our Islands and France.

Thursday, July 12.

Weather fair at many of our western and northern stations, but cloudy or overcast elsewhere, with rain in the Netherlands and Germany, and passing showers over England. Heavy rain falling later in the south of Sweden.

Temperature risen a little over our Islands and the northern parts of Scandinavia and France, but fallen elsewhere. Maxima below 60° at most of the English stations; only 54° at Spurn Head.

Wind moderate or fresh from the North-Westward over our Islands and France, but South-Westerly in Germany, and South-Easterly in the south of Sweden. Subsequently backing to West on our extreme north-west coasts.

Sea rather rough off the north-east of England, and also at Holyhead.

Barometer rising generally. Anticyclone extending from the Bay of Biscay to the west of Ireland, with a depression over the South of Sweden. Slight fall taking place later on our extreme north and north-west coasts.

Friday, July 13.

Weather fine in the south and south-east of our Islands, as well as in France, Belgium, and some parts of Scandinavia, but cloudy elsewhere, with showers at some of our northern stations.

Temperature risen generally. Maxima still rather low in most places, but thermometer rising to 71° at Leith and in London.

Wind light from North-West over England, and strong from the same quarter on the eastern shores of the North Sea, but Southerly or South-Westerly in Ireland and Scotland. Subsequently veering to North-West in Scotland.

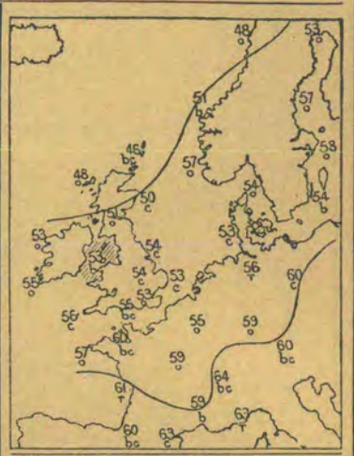
Sea moderate to smooth.

Barometer falling in the west and north of our Islands, but rising elsewhere. Large anticyclone lying over the Bay of Biscay and west of France. Depression of previous day passing away over the Baltic. Slight fall taking place generally later.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Saturday, July 14.

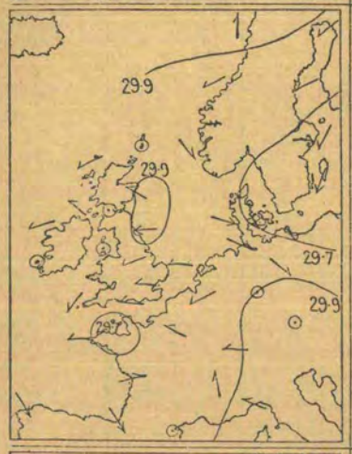
Weather fine at the Channel stations and also in the east and south of France, but cloudy elsewhere; with rain in the north and north-west of our Islands.

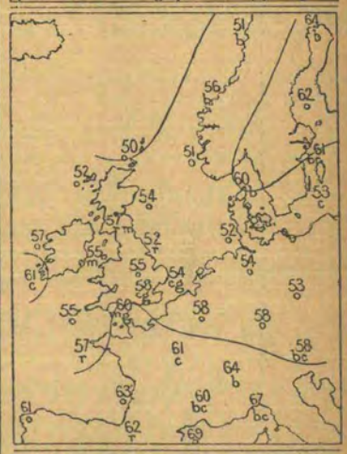
Temperature risen over Great Britain, but changed irregularly elsewhere; maximum readings a little above 71° over Central England, but below 60° at several of our western stations.

Wind light or moderate from the North-Westward over the North Sea and the adjacent coasts, but South-Easterly over the Bay of Biscay and the west and south of Ireland, and variable at our more central stations.

Sea slight or smooth generally.

Barometer rising on the eastern shores of the North Sea, but falling elsewhere. Pressure highest over France, but ridge of high readings extending northwards over Great Britain. Depressions forming later over the Bay of Biscay and our north-west coasts, and barometer falling generally.





Sunday, July 15.

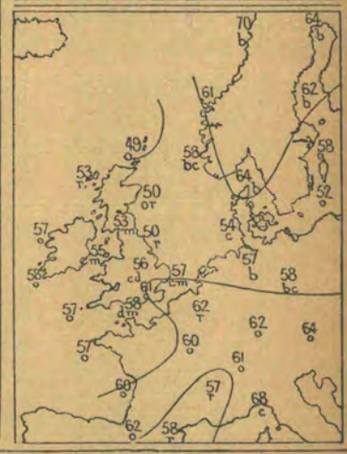
Weather fine in Scandinavia, South Germany, and the east of France, but cloudy elsewhere, with rain in many parts of the United Kingdom as well as in the north of France. Thunderstorms occurring at some of our southern stations during the ensuing night.

Temperature fallen a little over Great Britain, but risen at many of the Continental stations. Maximum readings below 60° in the northern and eastern parts of the United Kingdom generally and below 55° on the north-east coast of England.

Wind North-Westerly on the eastern shores of the North Sea and also over Spain and the south-west of France, but Easterly over Great Britain and the north of France and variable in Ireland.

Sea slight or smooth generally.

Barometer falling at all but the Swedish stations. Areas of high pressure lying over the north of Norway, South Germany, and Portugal, with a large area of low readings over the Baltic, and a small depression over Brittany. Slight rise taking place in west of France later.



Monday, July 16.

Weather fine in Scandinavia, Denmark, and the extreme south-east of England, but dull elsewhere, with rain in many parts of our Islands. Heavy rain falling over the Netherlands later.

Temperature risen a little over the south-east of England and the eastern shores of the North Sea, but fallen elsewhere. Maximum readings a little above 65° over Central England, but below 60° at all our northern and north-eastern stations.

Wind light or moderate from East or South-East in the north and east of our Islands, but variable in the south-west. Fresh or strong from West or South-West over Spain and the Bay of Biscay; light and variable in Scandinavia.

Sea moderate to smooth.

Barometer falling at all but the Scandinavian stations. Pressure high both over Spain and the north of Norway, but large area of low readings lying over the southern parts of Ireland and England. No important change later.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 109 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	56	41	53·4	43·9	48·3	− 5·2	44	0	2	0·07	−0·41	*	*
	Stornoway	62	39	57·0	45·7	51·0	− 3·5	63	0	5	0·41	−0·19	32	26
	Wick	58	40	54·0	45·3	49·4	− 5·8	52	0	5	0·77	+0·27	*	*
	Lairg ℳ	71	39	57·1	45·6	51·0	− 3·5	63	0	6	0·70	−0·01	*	*
	Glencarron ℳ	70	40	58·6	46·3	52·0	− 2·5	70	0	5	0·55†	?	?	?
	Fort Augustus ℳ	72	40	60·2	47·9	53·6	− 3·8	81	0	6	1·30†	?	*	*
1. SCOTLAND, E.	Nairn	67	44	59·1	48·0	53·2	− 4·5	78	0	5	0·80	+0·23	*	*
	Aberdeen	63	44	57·4	47·4	52·1	− 5·1	71	0	6	1·30	+0·71	19	16
	Braemar ℳ	70	40	59·1	45·8	52·0	− 2·8	70	0	6	1·08	+0·43	28‡	24‡
	Ochtertyre ℳ	72	44	63·4	49·7	56·1	− 1·8	99	0	5	1·19	+0·44	*	*
	Leith	72	43	62·1	48·6	54·9	− 3·7	90	0	5	1·52	+0·90	*	*
	Marchmont ℳ	69	40	59·0	46·4	52·3	− 4·2	72	0	6	2·34	+1·56	13	11
2. ENGLAND, N.E.	Alnwick Castle	63	42	56·7	47·6	51·8	− 5·9	69	0	6	2·27	+1·66	*	*
	Durham	67	39	59·3	45·3	51·8	− 6·9	69	0	6	1·13	+0·52	7	6
	Shields	64	42	56·4	46·9	51·3	− 7·2	65	0	5	1·45	+0·87	*	*
	Scarborough ℳ	61	43	56·3	47·4	51·5	− 8·0	67	0	6	2·03	+1·42	12‡	10‡
	York	65	41	60·0	45·6	52·3	− 9·0	72	0	5	1·80	+1·22	9	8
	Spurn Head	60	44	56·1	48·3	51·9	− 8·1	69	0	6	1·18	?	*	*
3. ENGLAND, E.	Hillington ℳ	69	38	61·5	47·5	54·0	− 6·6	84	0	5	1·19	+0·58	15	13
	Yarmouth	62	44	58·3	48·9	53·3	− 8·1	79	0	5	1·16	+0·56	*	*
	Geldeston	68	41	61·6	48·7	54·7	− 6·5	89	0	4	1·21	+0·67	17	15
	Cambridge	69	43	64·1	48·1	55·5	− 7·0	95	0	3	0·51	−0·01	14	12
	Rothamsted	68	41	61·2	48·6	54·5	− 7·9	88	0	6	0·82	+0·22	*	*
	Ingatestone	68	42	61·9	49·3	55·2	− 7·7	92	0	4	0·45	−0·10	15‡	13‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	65	40	61·9	44·7	52·7	− 8·7	75	0	6	1·53	+0·91	8‡	7‡
	Loughborough	71	39	62·0	48·3	54·7	− 7·5	89	0	6	1·31	+0·68	*	*
	Cheadle ℳ	65	38	58·9	46·4	52·2	− 8·2	71	0	5§	1·66§	+0·90§	*	*
	Churchstoke ℳ	68	38	61·8	45·9	53·3	− 6·6	79	0	5	1·46	+0·89	20	18
	Hereford ℳ	74	39	64·9	48·2	56·0	− 5·6	98	0	5	1·16	+0·64	*	*
	Cirencester	69	38	61·7	46·4	53·5	− 7·4	81	0	4	0·81	+0·13	24	21
	Oxford	69	41	62·3	48·3	54·8	− 6·6	90	0	5	1·15	+0·57	21	19
5. ENGLAND, S.	London	71	43	62·9	49·4	55·7	− 7·6	96	0	4	0·81	+0·32	14‡	13‡
	Strathfield Turgiss ℳ	72	41	64·5	47·7	55·5	− 6·2	95	0	4	1·21	+0·70	*	*
	Dungeness	66	41	60·3	48·9	54·2	− 7·5	85	0	5	0·36	−0·05	*	*
	Hastings (St. Leonard's)	69	39	62·7	49·7	55·8	− 5·3	97	0	4	0·55	+0·12	27	24
	Southampton	73	43	65·0	49·4	56·7	− 5·9	103	0	4	0·26	−0·29	31	28
	Hurst Castle	65	43	62·4	50·7	56·1	− 5·1	99	0	5	0·22	−0·27	*	*
	Stowell ℳ	66	41	62·0	47·6	54·3	− 6·1	86	0	5	0·28	?	27‡	24‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	63	45	57·9	48·8	53·0	− 3·9	77	0	6	1·57†	+0·32	*	*
	Glasgow	65	44	60·6	49·0	54·4	− 3·3	87	0	5	1·35	+0·55	25	21
	Ardrossan	60	42	58·7	48·4	53·2	− 4·5	78	0	4	0·97	+0·32	*	*
	Glenlee ℳ	64	39	60·1	46·7	52·9	− 4·5	76	0	5	0·79	?	*	*
	Douglas (Isle of Man)	66	45	58·7	51·1	54·6	− 2·7	88	0	3	0·82	+0·19	25	22
7. ENGLAND, N.W.	Newton Reigny (Penrith)	65	37	60·0	46·1	52·6	− 5·8	74	0	5	1·61	+0·92	18	16
	Barrow-in-Furness	61	44	58·9	50·0	54·1	− 5·1	85	0	5	1·51	+0·82	*	*
	Stonyhurst	62	40	59·3	48·2	53·4	− 5·6	80	0	4	1·92	+0·90	15	13
	Blackpool ℳ	62	43	58·9	49·6	53·9	− 6·0	83	0	5	1·33	+0·63	16	14
	Manchester	65	40	60·3	48·4	53·9	− 6·5	83	0	5	1·29	+0·42	*	*
	Liverpool Obsy (Bidston)	64	45	59·4	50·4	54·6	− 5·8	88	0	4	1·01	+0·33	*	*
	Llandudno ℳ	62	42	59·2	49·3	53·9	− 6·8	83	0	4	0·91	+0·30	20	18
	Holyhead	64	43	60·0	49·7	54·5	− 4·7	88	0	2	0·36	−0·16	*	*
8. ENGLAND, S.W.	Llandovery	71	35	65·0	47·6	55·7	− 4·7	96	0	5	0·85	−0·04	*	*
	Pembroke	62	45	58·1	50·9	54·3	− 5·6	86	0	5	2·33	+1·82	27	24
	Arlington (N. Devon)	66	41	61·7	47·9	54·3	− 6·6	86	0	4	0·56	−0·51	*	*
	Cullompton ℳ	68	42	64·7	46·9	55·2	− 6·3	92	0	5	0·43	−0·19	25	22
	Falmouth	65	47	60·5	51·2	55·5	− 5·5	95	0	2	1·41	+0·71	44	40
	Plymouth	70	47	65·5	51·7	58·1	− 3·6	113	0	4	0·75	+0·17	45	41
	Prawle Point	66	42	62·6	47·7	54·6	− 5·2	88	0	4	0·44	?	*	*
9. IRELAND, N.	Malin Head	62	42	55·6	49·4	52·3	− 4·4	72	0	4	0·51	?	*	*
	Londonderry	70	42	60·5	48·8	54·2	− 4·3	85	0	4	0·68	−0·07	*	*
	Mullaghmore	65	47	59·1	51·3	54·9	− 4·7	90	0	4	0·61	−0·27	*	*
	Belmullet	65	47	60·4	51·7	55·8	− 1·8	97	0	3	0·06	?	*	*
	Markree Castle	67	44	60·0	50·0	54·7	− 5·0	89	0	4	0·24	−0·50	7	6
	Brookeborough	69	40	59·9	47·6	53·3	− 6·7	79	0	5	0·96	?	*	*
	Armagh	67	40	60·2	46·8	53·0	− 6·8	77	0	5	0·35	−0·36	19	17
	Donaghadee	63	44	57·1	48·7	52·6	− 5·6	74	0	5	0·82	+0·23	*	*
	Edgeworthstown	66	40	60·7	46·9	53·3	− 6·5	79	0	4	0·41	−0·41	*	*
10. IRELAND, S.	Dublin	68	43	62·5	50·4	56·0	− 3·7	98	0	2	0·23	−0·29	29	25
	Parsonstown	69	39	63·4	47·9	55·1	− 4·2	92	0	2	0·18	−0·50	21	18
	Kilkenny	69	41	62·9	47·0	54·4	− 5·5	87	0	2	0·15	−0·38	*	*
	Waterford	69	42	65·6	47·4	55·9	− 4·7	97	0	2	0·34	−0·28	*	*
	Roche's Point	66	45	62·9	49·4	55·7	− 5·1	96	0	1	0·25	−0·47	*	*
	Valencia	64	48	61·4	51·0	55·8	− 3·7	97	0	4	0·25	−0·63	29	26
	Killarney	66	36	63·0	47·3	54·6	− 4·9	88	0	2	0·16	?	*	*
	Foynes	68	43	62·7	49·7	55·8	− 3·6	97	0	3	0·25	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	62	49	59·1	51·7	55·1	− 5·4	92	0	2	0·21	−0·29	*	*
	Jersey (Noirmont)	69	47	63·4	52·9	57·8	− 3·8	111	0	3	1·25	+0·75	57	52

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked Ⓢ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

§ The corresponding values for last week should read "5," "0·59," "−0·12."

Erratum.—Owing to an error in last week's Return from Newton Reigny the minimum temperature for the week for that station should read "35" and not "30."

Note.—The Sunshine Recorder at Glencarron is out of order. It will be observed that Leicester has been removed from the list of stations in the "Midland Counties."

(OFFICIAL COPY.)

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 29.] *Second Series.* WEEK ENDING MONDAY, 23RD JULY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 116.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	77	42	62·2	48·7	55·0	0 (average).	91	+ 5	0	0	746	−129	711	+201
	1. SCOTLAND, EAST	77	40	64·7	49·6	56·6	1 below.	102	− 5	0	0	916	−272	700	+157
	2. ENGLAND, N.E.	76	44	65·7	51·5	58·1	1 below.	113	− 3	0	0	943	−315	555	+ 73
	3. ENGLAND, EAST	73	45	68·4	52·9	60·1	2 below.	127	0	0	0	1238	−254	661	+154
	4. MIDLAND COUNTIES	76	44	67·9	52·9	59·9	1 below.	125	+ 1	0	0	1210	−296	654	+150
	5. ENGLAND, SOUTH	73	49	66·1	55·0	60·1	2 below.	127	− 6	0	0	1270	−339	577	+204
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	73	42	64·3	52·7	58·1	1 above.	113	+ 6	0	0	1063	−192	505	+107
	7. ENGLAND, N.W.	72	45	65·6	53·2	59·0	1 below.	119	+ 4	0	0	1096	−232	500	+117
	8. ENGLAND, S.W.	75	47	64·5	53·6	58·7	2 below.	117	− 5	0	0	1238	−300	487	+254
	9. IRELAND, NORTH	74	47	64·3	52·2	57·8	1 below.	111	+ 4	0	0	1147	−184	417	+ 67
	10. IRELAND, SOUTH	71	49	64·3	53·2	58·4	2 below.	115	− 1	0	0	1363	−172	352	+113
	— CHANNEL ISLANDS	67	53	63·0	55·2	58·7	3 below.	117	−12	0	0	1390	−254	247	+154

Rainfall.

	DISTRICTS. (See p. 116.)	For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.
			10ths of In.				Ins.	Ins.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	4	8	0 (average).	131	+ 6	20·7	−1·2
	1. SCOTLAND, EAST	4	14	7 more.	114	+10	17·4	+0·8
	2. ENGLAND, N.E.	4	11	4 more.	105	+ 4	14·4	+0·7
	3. ENGLAND, EAST	4	5	1 less.	107	+ 4	12·8	−0·3
	4. MIDLAND COUNTIES	5	10	4 more.	99	− 3	13·7	−1·1
	5. ENGLAND, SOUTH	5	7	2 more.	101	+ 4	14·3	+0·3
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	6	13	5 more.	105	−10	23·0	+0·5
	7. ENGLAND, N.W.	6	11	4 more.	108	+ 3	14·2	−3·8
	8. ENGLAND, S.W.	7	10	3 more.	110	− 1	17·8	−3·8
	9. IRELAND, NORTH	6	11	3 more.	111	−16	19·0	+0·7
	10. IRELAND, SOUTH	6	11	5 more.	102	−18	20·1	−0·6
	— CHANNEL ISLANDS	7	10	5 more.	125	+ 6	16·4	+0·2

Bright Sunshine.

	DISTRICTS. (See p. 116.)	For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	29	25	827	+ 38	31	+ 2
	1. SCOTLAND, EAST	39	34	824	− 64	31	− 2
	2. ENGLAND, N.E.	41	36	705	−112	26	− 5
	3. ENGLAND, EAST	31	27	736	−230	28	−10
	4. MIDLAND COUNTIES	25	23	683	−190	26	− 7
	5. ENGLAND, SOUTH	20	18	702	−226	27	− 8
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	26	23	853	+ 6	32	0
	7. ENGLAND, N.W.	31	27	750	−104	28	− 4
	8. ENGLAND, S.W.	29	26	882	−106	34	− 4
	9. IRELAND, NORTH	30	27	750	− 58	28	− 3
	10. IRELAND, SOUTH	33	29	851	− 44	33	− 1
	— CHANNEL ISLANDS	17	16	979	−185	37	− 8

General Remarks.

Weather has continued dull and unsettled very generally, with local thunderstorms and frequent falls of rain.

Temperature has been somewhat higher than of late, and in some parts of Scotland it has slightly exceeded the mean for the time of year; in all other districts, however, a deficit is still shown, varying in amount from 1° to 3°. The highest of the maxima, which were recorded at most stations on the 19th, ranged from 67° in the "Channel Islands" to 71° in "Ireland, S." and to 77° in the north and east of Scotland. The minima were in most cases rather above their mean value for the time of year, but on some occasions they fell below it, the absolute minima varying from 40° to 42° in Scotland, from 47° to 49° in Ireland, and from 44° to 49° in England. In the "Channel Islands" the lowest reading was 53°.

Rainfall has been a little less than the mean in "England, E." and about equal to it in "Scotland, N.", but more in all other districts, the excess in some localities being considerable. At Newton Reigny during a thunderstorm on the 22nd 0·42 in. of rain fell in the brief space of eight minutes.

Bright sunshine has been very little prevalent, the percentage of the possible amount of duration ranging from 36 in "England, N.E.", to 18 in "England, S." and only 16 in the "Channel Islands".

Depressions observed.—At the commencement of the week a large shallow low pressure system covered the whole of England, the north of France, the Netherlands, and North Germany. This, however, moved away gradually to the eastward, and depressions began to appear on our western coasts from the Atlantic, while some very small disturbances travelled northwards over our Islands from the Bay of Biscay. By the end of the period depressions were still shown over the western parts of our area, but the barometer had become highest and was still rising over Germany and the south-east of France.

ERRATUM.—In the temperature paragraph of the "General Remarks" for last week the name "Hillingdon" was printed in error for "Hillington".

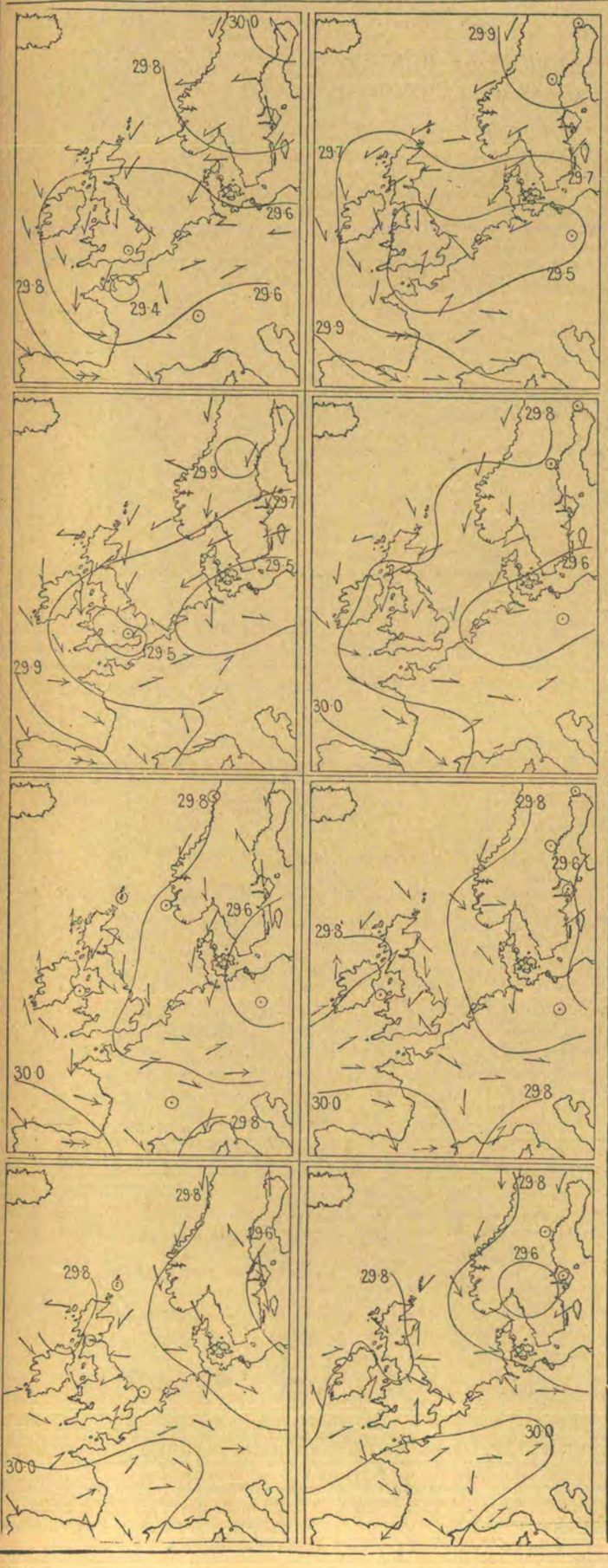
A 55139. 350.—7/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Tuesday, July 17.

Weather fine in the south of our Islands and also in Scandinavia, but cloudy elsewhere, with rain in Scotland and the south-west of France. Rain falling later in all parts of our Islands, with thunderstorms in the south of England.

Temperature changed little and irregularly. Still low for time of year, maximum readings over our Islands being below 65° in all but our midland districts, and below 60° at some of our north-eastern and north-western stations.

Wind light or moderate from the North-Eastward at all our more northern stations, but variable in the south of England and strong from West over the southern part of the Bay of Biscay.

Sea slight or smooth generally.

Barometer rising a little in most places. Pressure high both over Spain and Northern Europe, with large area of low readings over England, the Netherlands, and the north of France. Low pressure systems subsequently moving eastwards, and barometer continuing to rise at all but our south-eastern stations.

Wednesday, July 18.

Weather fine in Scandinavia, Denmark, and the east of Scotland, but cloudy elsewhere, with rain at several of the English stations. Thunderstorms occurring later in some parts of England and France.

Temperature risen several degrees in the north, but changed irregularly elsewhere. Maxima higher than on previous day, but below 70° at all but our central stations.

Wind North-Easterly in Scandinavia, Denmark, and the north of our Islands, but North-Westerly at our southern and the French stations; strong in force over the Bay of Biscay and the mouth of the Channel.

Sea rather rough in the south-west, but moderate to smooth elsewhere.

Barometer rising at all but the Swedish stations. Pressure highest over Portugal, and relatively high over Scandinavia, but small depressions lying respectively over the south-east of England and North Germany. Depressions subsequently dispersing or moving away to the eastward.

Thursday, July 19.

Weather fine over the greater part of the United Kingdom as well as in Scandinavia and Denmark, but foggy at some of our northern stations, and rainy over the Netherlands and Western Germany. Thunderstorms occurring later over Central and South-Eastern Europe.

Temperature risen a little in most places. Maxima still low in the west and south-west, but exceeding 70° in the northern, central, and eastern parts of the Kingdom, the highest being 76° at Loughborough and 75° at Wick.

Wind light or moderate from the Northward over Scandinavia, Denmark, and the greater part of our Islands, but strong from North-West over the Bay of Biscay, and light from South in the west of Ireland. Subsequently backing to South-West or South at all our western stations.

Sea rather rough at the mouth of the Channel.

Barometer rising at all but the Swedish and our extreme western stations. Pressure highest over Spain and lowest in a large area lying over the Baltic and North Germany. Shallow depression appearing over west of Ireland later, and barometer falling in west and north generally.

Friday, July 20.

Weather dull and unsettled in France and the west and south of England, with rain in many places, and fog over the Channel, but fine in most other localities. Thunderstorms occurring in west of Scotland in evening.

Temperature fallen several degrees in the extreme north, but risen elsewhere. Maximum readings above 70° in the east of Scotland and the north of England, but below 65° at many of our southern stations.

Wind light Easterly on our north and east coasts, but South-Westerly in the south and North-Westerly on the eastern shores of the North Sea.

Sea slight or smooth generally.

Barometer falling in Scandinavia and the west and north of our Islands, but rising elsewhere. Pressure highest in Spain and the south-west of France, with shallow depressions over the Baltic and west of Scotland. New disturbance appearing off the west of Ireland later.

Synoptic Charts.

TEMPERATURE AND WEATHER

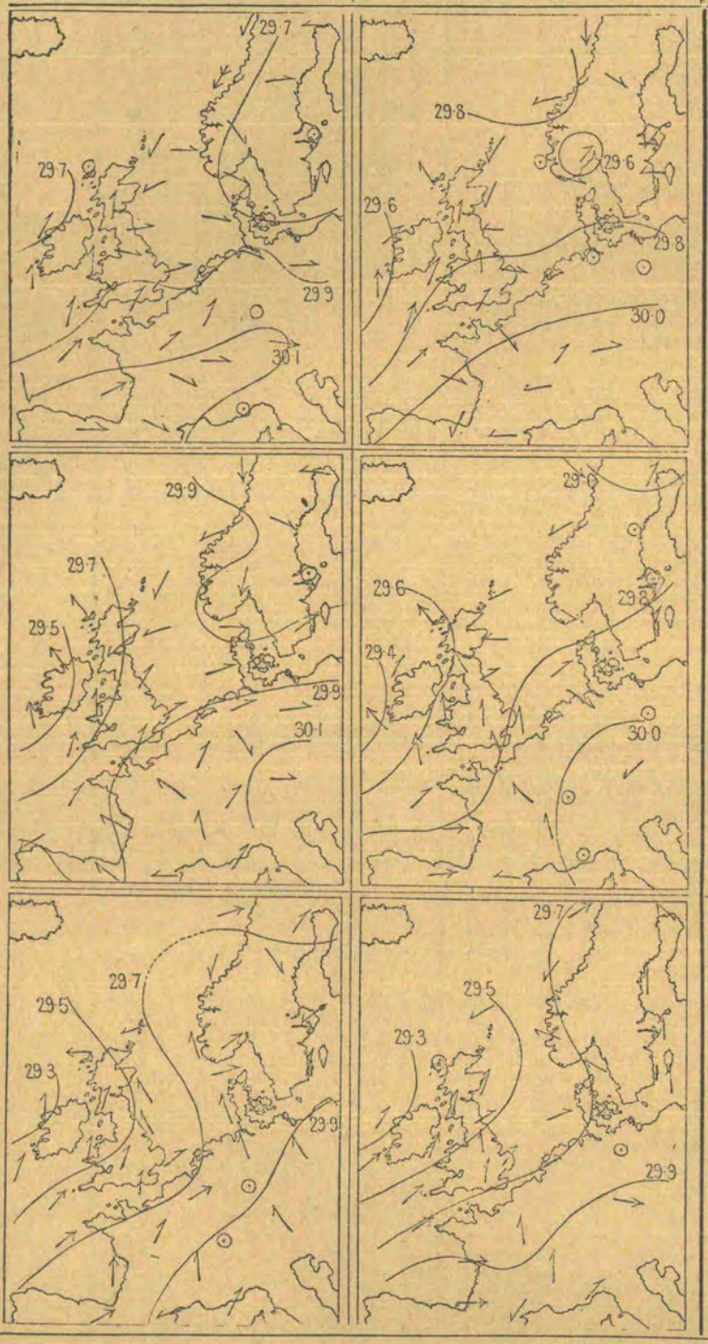
at 8 a.m.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, July 21.

Weather fair over the greater part of England and fine in Scandinavia and Denmark, but dull elsewhere, with fog or mist at several of our northern stations. Showers falling in west later.

Temperature fallen several degrees in the north, but risen slightly elsewhere. Maximum readings below 55° in the north-east of Scotland and below 70° in most other parts of the Kingdom.

Wind North-Easterly over the northern parts of Scotland and Scandinavia, but Southerly or South-Westerly elsewhere; light or moderate in force generally.

Sea slight or smooth generally.

Barometer falling in our Islands, but rising at most of the Continental stations. Large anticyclone lying over Spain and the southern parts of France and Germany, with a shallow depression to the north-westward of our Islands and another over the south of Sweden. New disturbance appearing later off the south-west of Ireland.

Sunday, July 22.

Weather dull and showery in Ireland and Scotland, but fair in most other parts of western Europe. Thunderstorms, with heavy rain, occurring over England at night.

Temperature fallen in Scandinavia, Denmark, and the north-east of our Islands, but risen elsewhere. Maxima above 65° over central England, but below 55° in the east of Scotland and north-east of England.

Wind Easterly in Scotland but Southerly or South-Westerly over England and Ireland, and South-Easterly in France; strong in force in the south of Ireland.

Sea rough on our south-west coasts, but moderate to smooth elsewhere.

Barometer falling generally. Pressure high over Portugal and South Germany, with a rather deep depression off the west of Ireland, and a shallow disturbance over the north of Scandinavia. Shallow secondary depression subsequently advancing from the Bay of Biscay to the south of England.

Monday, July 23.

Weather rainy in Scotland, and dull in the Netherlands and France, but fair or fine elsewhere. Showers falling later in most parts of the Kingdom, with thunderstorms locally.

Temperature changed little and irregularly. Maximum readings slightly above 70° over Central England, but below 65° at many of our western and northern stations.

Wind Easterly in Scotland, and South-Easterly on the eastern shores of the North Sea, but Southerly or South-Westerly elsewhere; strong in force at several of our southern stations.

Sea rather rough in the English and Bristol Channels, but moderate to smooth elsewhere.

Barometer falling at all but the Swedish stations. Pressure high over the southern parts of France and Spain, with a depression off the west of Ireland. Depression subsequently moving slowly north-eastwards, and barometer rising again in south.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	67	44	57·6	48·1	52·5	− 1·2	74	0	1	0·84	+0·35	*	*
	Stornoway	68	45	61·4	48·6	54·6	0·0	88	0	5	0·65	−0·04	36	31
	Wick	75	47	61·4	48·1	54·3	− 1·0	86	0	3	0·74	+0·23	*	*
	Lairg ℳ	77	42	65·6	46·4	55·3	+ 0·4	93	0	4	0·32	−0·39	*	*
	Glencarron ℳ	73	47	64·0	50·4	56·7	+ 1·8	103	0	5	1·01†	?	21	18
	Fort Augustus ℳ	76	48	63·2	50·5	56·4	− 1·2	101	0	6	0·91†	?	*	*
1. SCOTLAND, E.	Nairn	73	48	63·3	49·7	56·0	− 1·8	98	0	4	0·57	−0·03	*	*
	Aberdeen	71	49	62·9	50·0	56·0	− 1·3	98	0	4	0·79	+0·16	49	42
	Braemar ℳ	71	40	63·6	45·9	54·1	− 0·8	85	0	4	1·08	+0·39	24‡	21‡
	Ochtertyre ℳ	77	46	68·4	50·7	58·9	+ 0·9	118	0	5	3·55	+2·80	*	*
	Leith	70	49	64·3	51·0	57·2	− 1·3	106	0	5	1·30	+0·67	*	*
	Marchmont ℳ	73	46	65·7	50·1	57·4	+ 0·8	108	0	4	1·13	+0·34	44	38
2. ENGLAND, N.E.	Alnwick Castle	68	48	63·3	51·0	56·7	− 0·9	103	0	3	0·73	+0·06	*	*
	Durham	76	44	68·1	50·2	58·5	− 0·2	116	0	3	1·30	+0·67	40	35
	Shields	68	48	63·7	50·9	56·9	− 1·6	104	0	4	0·90	+0·30	*	*
	Scarborough ℳ												‡	‡
	York	74	47	69·6	52·6	60·5	− 0·9	130	0	4	1·18	+0·60	41	36
	Spurn Head	70	51	63·7	53·0	58·0	− 2·3	112	0	4	1·21	?	*	*
3. ENGLAND, E.	Hillington ℳ	73	46	69·7	53·0	60·8	− 0·1	132	0	5	0·28	−0·33	33	29
	Yarmouth	68	48	65·3	54·0	59·3	− 2·2	121	0	1	0·13	−0·48	*	*
	Geldeston	73	45	69·6	53·1	60·8	− 0·6	132	0	2	0·17	−0·38	33	30
	Cambridge	72	47	70·3	52·0	60·5	− 2·2	130	0	5	0·93	+0·32	28	25
	Rothamsted	69	48	67·0	52·8	59·4	− 3·0	122	0	5	0·77	+0·17	*	*
	Ingatestone	70	48	68·3	52·3	59·7	− 3·2	124	0	4	0·46	−0·08	28‡	25‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	75	44	69·0	52·3	60·1	− 1·3	127	0	4	0·91	+0·29	28‡	25‡
	Loughborough	76	52	70·0	54·3	61·6	− 0·6	137	0	5	0·69	+0·17	*	*
	Cheadle ℳ	68	48	66·0	52·1	58·6	− 1·8	116	0	4	0·76	+0·06	*	*
	Churchstoke ℳ	73	45	68·0	52·3	59·6	− 0·8	123	0	5	1·39	+0·81	25	22
	Hereford ℳ	73	46	68·3	52·9	60·1	− 1·6	127	0	7	1·13	+0·61	*	*
	Cirencester	69	49	66·7	52·1	58·9	− 2·2	118	0	6	0·90	+0·20	25	23
	Oxford	72	50	67·1	54·3	60·3	− 1·3	128	0	6	0·98	+0·40	22	20
5. ENGLAND, S.	London	72	50	68·7	55·1	61·4	− 1·9	136	0	5	0·99	+0·50	17‡	15‡
	Strathfield Turgiss ℳ	73	50	69·0	54·1	61·0	− 0·4	133	0	5	0·25	−0·27	*	*
	Dungeness	65	51	63·7	55·0	59·1	− 2·6	120	0	4	0·39	−0·03	*	*
	Hastings (St. Leonard's)	68	52	64·1	55·0	59·2	− 2·1	120	0	4	0·79	+0·34	23	21
	Southampton	69	53	66·7	55·5	60·7	− 0·9	131	0	7	0·86	+0·28	20	18
	Hurst Castle	69	55	65·6	56·1	60·5	− 0·8	130	0	5	0·36	−0·13	*	*
	Stowell ℳ	67	49	64·8	54·0	59·0	− 1·6	119	0	5	0·95	?	20‡	18‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	73	52	63·1	54·1	58·3	+ 1·3	114	0	6	1·08†	−0·26	*	*
	Glasgow	72	50	65·6	52·9	58·8	+ 1·0	118	0	6	1·21	+0·40	22	19
	Ardrossan	70	50	64·0	52·1	57·6	− 0·1	109	0	5	0·65	0·00	*	*
	Glenlee ℳ	72	42	65·0	49·9	56·9	− 0·7	104	0	5	2·02	?	*	*
	Douglas (Isle of Man)	67	52	63·6	54·6	58·8	+ 1·3	118	0	6	1·68	+1·01	29	26
7. ENGLAND, N.W.	Newton Reigny (Penrith)	71	45	66·2	49·5	57·3	− 1·1	107	0	5	1·26	+0·57	35	31
	Barrow-in-Furness	67	51	64·7	54·0	59·0	− 0·5	119	0	5	1·11	+0·42	*	*
	Stonyhurst	72	52	66·4	53·0	59·2	0·0	120	0	5	1·36	+0·34	26	23
	Blackpool ℳ	69	52	66·7	53·0	59·4	− 0·6	122	0	4	0·80	+0·10	33	29
	Manchester	71	52	67·5	54·0	60·3	− 0·1	128	0	6	1·38	+0·51	*	*
	Liverpool Obsy (Bidston)	69	53	66·6	54·3	60·0	− 0·7	126	0	5	0·78	+0·10	*	*
	Llandudno ℳ	67	53	65·2	54·0	59·2	− 1·5	120	0	7	0·96	+0·35	28	25
	Holyhead	65	53	61·3	53·9	57·3	− 2·1	107	0	7	0·91	+0·40	*	*
8. ENGLAND, S.W.	Llandovery	75	48	68·0	54·0	60·5	0·0	130	0	7	1·63	+0·80	*	*
	Pembroke	65	53	60·4	54·3	57·1	− 2·9	106	0	7	1·06	+0·54	29	26
	Arlington (N. Devon)	70	50	64·7	52·3	58·1	− 2·9	113	0	7	1·10	−0·01	*	*
	Cullompton ℳ	71	49	67·3	53·7	60·0	− 1·6	126	0	5	1·20	+0·58	24	22
	Falmouth	65	52	61·9	54·2	57·8	− 3·4	111	0	7	0·63	−0·07	31	28
	Plymouth	70	48	66·8	55·1	60·5	− 1·2	130	0	7	0·54	−0·06	31	28
	Prawle Point	65	47	62·3	51·6	56·6	− 3·4	102	0	6	0·74	?	*	*
9. IRELAND, N.	Malin Head	67	50	60·4	51·9	55·9	− 1·8	97	0	7	1·23	?	*	*
	Londonderry	74	49	69·1	51·6	59·7	+ 1·2	124	0	6	1·04	+0·27	*	*
	Mullaghmore	67	52	63·6	54·0	58·5	− 0·2	116	0	6	1·19	+0·31	*	*
	Belmullet	65	51	62·6	53·3	57·7	0·0	110	0	6	0·97	?	*	*
	Markree Castle	67	50	63·9	52·4	57·8	− 2·0	111	0	6	1·30	+0·56	29	26
	Brookeborough	68	47	65·9	51·3	58·1	− 1·9	113	0	6	1·15	?	*	*
	Armagh	70	48	65·6	51·8	58·2	− 1·6	113	0	7	0·71	0·00	31	27
	Donaghadee	65	50	61·6	51·4	56·1	− 2·1	99	0	7	0·83	+0·23	*	*
	Edgeworthstown	69	51	65·7	52·0	58·4	− 1·4	115	0	6	1·23	+0·42	*	*
10. IRELAND, S.	Dublin	69	53	64·6	54·5	59·2	− 0·7	120	0	7	0·94	+0·39	26	23
	Parsonstown	71	51	66·1	53·3	59·3	0·0	121	0	7	1·41	+0·72	32	29
	Kilkenny	67	51	64·7	53·1	58·5	− 1·6	116	0	7	1·16	+0·61	*	*
	Waterford	70	51	66·3	53·1	59·2	− 1·5	120	0	7	1·31	+0·68	*	*
	Roche's Point	65	53	62·6	54·4	58·2	− 2·6	113	0	5	1·46	+0·75	*	*
	Valencia	64	51	62·4	54·4	58·1	− 1·0	113	0	5	0·89	0·00	40	36
	Killarney	66	47	63·3	50·5	56·5	− 3·2	102	0	5	1·08	?	*	*
	Foynes	69	49	64·7	52·6	58·2	− 1·2	113	0	6	0·71	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	65	53	61·9	54·7	58·1	− 2·6	113	0	7	0·66	+0·15	*	*
	Jersey (Noirmont)	67	54	64·1	55·7	59·3	− 2·5	121	0	7	1·40	+0·99	17	16

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ℬ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 30.] *Second Series.* WEEK ENDING MONDAY, 30TH JULY, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 120.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	69	39	57·3	46·1	51·3	4 below.	65	−22	0	0	811	−143	711	+201
	1. SCOTLAND, EAST	68	37	59·0	47·4	52·7	4 below.	75	−33	0	0	991	−298	700	+157
	2. ENGLAND, N.E.	72	42	60·2	50·3	54·9	4 below.	90	−26	0	0	1033	−333	555	+ 73
	3. ENGLAND, EAST	70	45	65·1	52·2	58·2	4 below.	113	−15	0	0	1351	−262	661	+154
	4. MIDLAND COUNTIES	69	45	62·3	50·6	56·1	5 below.	93	−25	0	0	1309	−318	654	+150
	5. ENGLAND, SOUTH	71	48	64·5	54·7	59·2	2 below.	120	−15	0	0	1290	−350	577	+204
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	67	42	61·0	50·4	55·3	2 below.	93	−16	0	0	1156	−207	505	+107
	7. ENGLAND, N.W.	68	43	60·8	51·8	56·0	4 below.	98	−19	0	0	1194	−248	500	+117
	8. ENGLAND, S.W.	68	48	61·9	53·2	57·2	4 below.	106	−19	0	0	1344	−318	487	+254
	9. IRELAND NORTH	68	40	60·7	49·8	54·9	4 below.	90	−19	0	0	1237	−199	417	+ 67
	10. IRELAND, SOUTH	70	45	62·5	51·1	56·4	3 below.	101	−17	0	0	1464	−189	352	+113
	— CHANNEL ISLANDS	67	52	63·3	55·4	59·1	2 below.	120	−12	0	0	1510	−263	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 120.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	4	4	2 less.	135	+ 7	21·1	−1·7	19	16	846	+ 23	30	+ 1
	1. SCOTLAND, EAST	5	6	1 less.	119	+12	18·0	+1·7	21	18	845	− 82	30	− 3
	2. ENGLAND, N.E.	6	20	14 more.	111	+ 6	16·5 *	+2·2	19	17	722 *	−130	26	− 5
	3. ENGLAND, EAST	7	19	13 more.	114	+ 7	14·7	+1·0	30	28	766	−274	28	−10
	4. MIDLAND COUNTIES	7	14	8 more.	106	0	15·1	−0·3	23	22	706	−203	26	− 7
	5. ENGLAND, SOUTH	6	18	13 more.	107	+ 7	16·1	+1·6	25	23	727	−245	27	− 8
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	6	12	5 more.	111	− 7	21·2	+1·0	18	17	871	− 14	31	− 1
	7. ENGLAND, N.W.	6	18	10 more.	114	+ 5	16·0	−2·7	16	15	766	−125	28	− 4
	8. ENGLAND, S.W.	7	17	9 more.	117	+ 2	19·5	−2·9	28	26	910	−129	33	− 5
	9. IRELAND, NORTH	5	21	14 more.	116	−15	21·1	+2·0	24	22	774	− 65	28	− 2
	10. IRELAND, SOUTH	6	19	12 more.	108	−15	22·0	+0·6	34	32	895	− 48	32	− 3
	— CHANNEL ISLANDS	7	16	11 more.	132	+ 9	18·0	+1·3	27	25	1006	−217	37	− 8

General Remarks.

Weather has continued in a very unsettled and changeable state, with heavy falls of rain at nearly all the Irish and English stations, and severe local thunderstorms.

Temperature has remained considerably below the mean, the deficit ranging from 2° in "England, S.", "Scotland, W.", and the "Channel Islands", to 5° in the "Midland Counties" The highest temperatures were, as a rule, registered either on the 24th or 25th, when the thermometer rose to between 67° and 70° in the "Grazing Districts", and to between 69° and 72° in the "Wheat-producing" Districts. Towards the close of the week, the maximum readings were below 60° in all the more northern parts of the Kingdom. The lowest temperatures, which were recorded on irregular dates, ranged from 37° in "Scotland, E." and 39° in "Scotland, N." to 48° in "England, S." and "England, S.W.", and 52° in the "Channel Islands".

Rainfall has been largely in excess of the mean in all districts excepting "Scotland, N." and "Scotland, E.", where a slight deficit is reported. In Ireland, and the east and south of England, the aggregate for the week amounted to as much as three times the normal, and at Durham, during thunderstorms which occurred on the 25th and 26th, the total amount collected was no less than 3·75 ins.

Bright sunshine has again been very deficient, the percentages of the possible amount varying from between 16 and 18 over the northern parts of our Islands, to 28 in "England, E." and 32 in "Ireland, S."

Depressions observed.—Barometrical pressure has been highest over Spain, but a second area of high readings has existed to the northward of the British Isles, and the general distribution has therefore been somewhat complex. Several depressions have passed eastwards across our Islands. Those which appeared during the early part of the week were of irregular form, and travelled over the more northern parts of our area, occasioning strong South-Westerly to Westerly winds on the Channel coasts, and heavy falls of rain in many places. On the 27th and 28th, however, a more clearly defined and much deeper disturbance travelled across the south of England, and afterwards passed away to Denmark, its progress being attended by Southerly to Westerly gales at the Channel stations, and heavy rain in the south generally. At the close of the period this disturbance was passing away over Scandinavia, but two small depressions had appeared over our southern districts, and unsettled thundery weather was very prevalent over England.

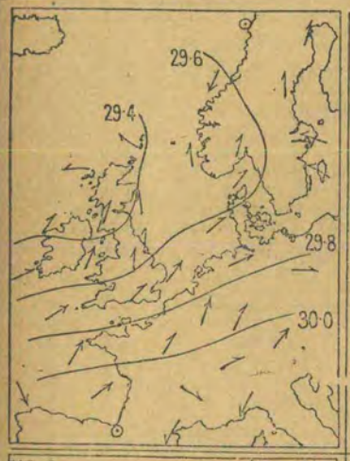
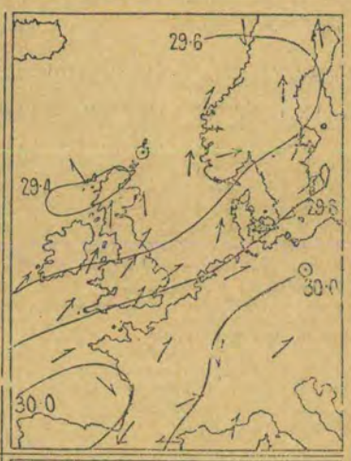
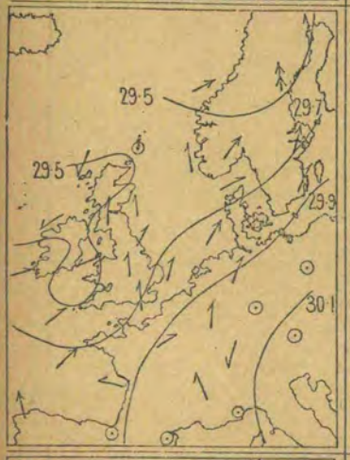
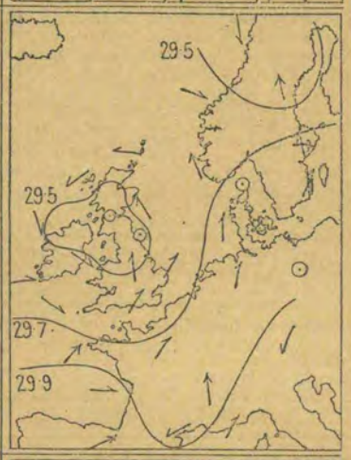
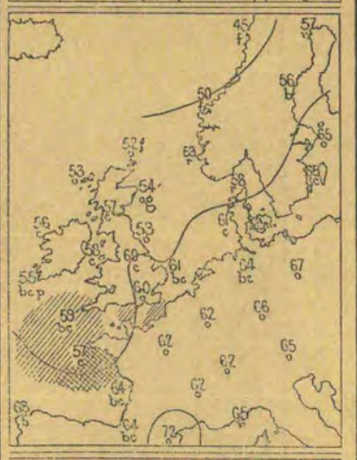
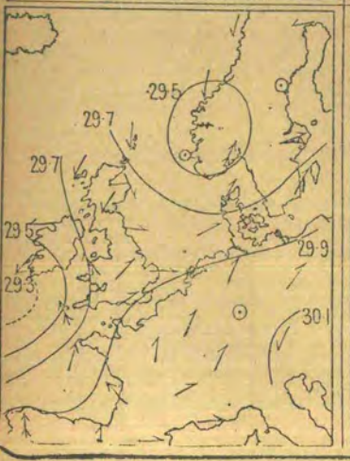
* These values have been altered slightly owing to the receipt of further information.

A 55208. 350.—8/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

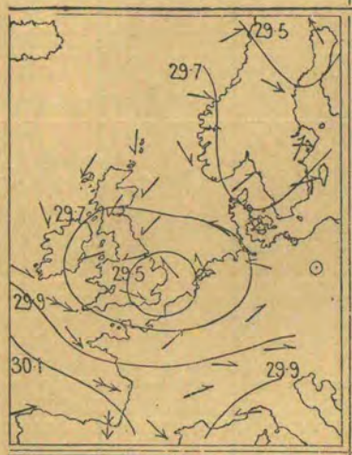
8 a.m.	6 p.m.	Weather during the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. TEMPERATURE AND WEATHER at 8 a.m.
		**Tuesday, July 24.** *Weather* foggy or misty in the north of Scotland and showery over the greater part of England and Ireland, but fair at most of the Continental stations. Thunderstorms occurring later in various parts of the United Kingdom. *Temperature* changed irregularly, and still low generally. Maximum readings below 70° over the whole of our Islands, and below 60° in the north of Scotland. *Wind* South-Easterly or Easterly in Scandinavia and the north of Scotland, but South-Westerly elsewhere; strong in force over the Channel and south of England. *Sea* rough or rather so on most parts of our western and southern coasts. *Barometer* rising at all but the Scandinavian stations. Pressure high over South Germany and also over the south of the Iberian Peninsula, but large area of low readings lying over Scotland and the north of Ireland. Fall setting in over France later.	
		**Wednesday, July 25.** *Weather* rainy over England and also in the north of Sweden, but fair or fine elsewhere. Showers falling later in Ireland and Scotland, and thunderstorms occurring at some of our northern stations. *Temperature* changed little and irregularly. Maximum readings below 65° in most places, and below 60° in the north of Scotland and the north-east of England. *Wind* light South-Easterly over the northern parts of our Islands and the south of France, but Southerly or South-Westerly elsewhere; strong to a gale in force over the English Channel. Subsequently veering to the Westward at some of our southern stations. *Sea* rough at Pembroke and rather rough in the English Channel, but moderate to smooth elsewhere. *Barometer* rising in Denmark, Germany, and the north of our Islands, but falling elsewhere. Pressure highest over South Germany, but relatively high in the south of Spain, with an irregularly formed depression over the St. George's Channel and our extreme north-west coasts. Depression subsequently moving north-eastwards, and barometer rising again in west.	
		Thursday, July 26. *Weather* fine over the greater part of our Islands and France, but showers reported locally. Foggy in the north-west of Norway, and rainy at Haparanda, Skudesnaes, and Nice. Heavy thunderstorms occurring in the east of England later. *Temperature* fallen in the west and north of our Islands, and also in the south of France, but risen elsewhere. Maximum readings below 70° in nearly all districts, and below 60° in the north and east of Scotland. *Wind* light South-Easterly in the south of Norway, and North-Easterly in the north of Scotland, but fresh or strong from West or South-West at our southern and the French stations. *Sea* rather rough at many of the Channel stations, but moderate to smooth elsewhere. *Barometer* rising at all but the Danish stations. Pressure highest over the Iberian peninsula, with a shallow depression over the North Sea and another over the north of Sweden. Former disturbance subsequently moving north-eastwards to Norway.	
		**Friday, July 27.** *Weather* rainy on our south-west coasts and also in the south of Norway, but fair or fine in most other localities. Heavy rain falling later at most of our western and southern stations. *Temperature* fallen a little in most places. Maxima below 60° in the west and extreme north, but exceeding 65° over our central districts. *Wind* moderate North-Easterly in the northern parts of Scotland and Scandinavia, but South-Westerly over Germany, Denmark, and the south-east of England, and strong from South-East or South on our south-west coasts. Subsequently veering to the Westward in the extreme south-west. *Sea* rough in the south-west. *Barometer* falling quickly in the south-west and slightly over Scandinavia, but rising elsewhere. Pressure high over the southern parts of Germany and Spain, with a shallow depression over Norway, and a deeper one off our south-west coasts. Latter disturbance subsequently moving eastwards across the south of England.	

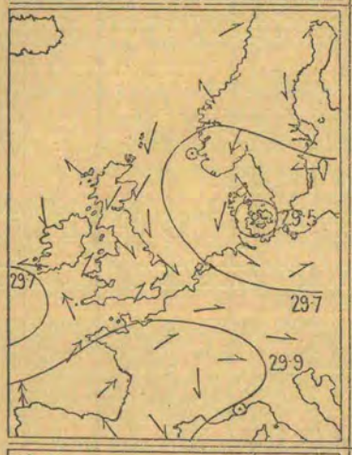
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

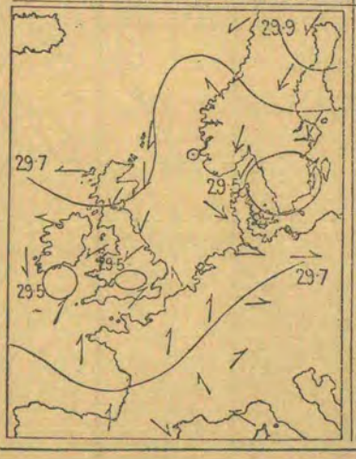
Synoptic Charts.

PRESSURE AND WIND.

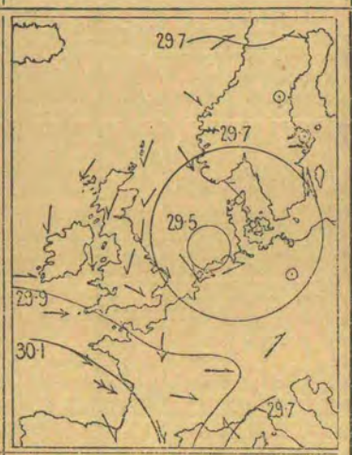
8 a.m.

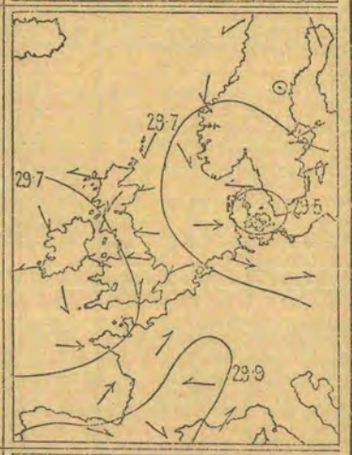


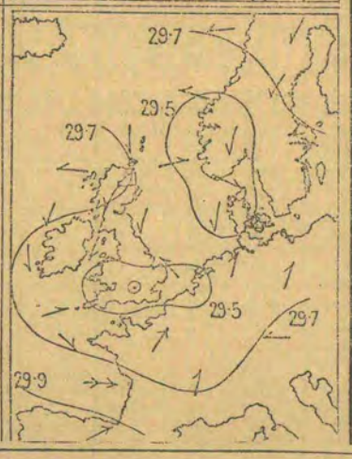




6 p.m.







Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, July 28.

Weather fine in the west and south of France as well as at some of our south-western stations, but cloudy elsewhere, with rain in many places.

Temperature risen a little in Germany, France, and the south-east of England, but fallen elsewhere. Maximum readings below 60° at all our more northern stations and below 55° in the north and extreme north-west.

Wind moderate North-Easterly in the north, but strong to a gale from West and North-West over the Channel and Bay of Biscay. Moderate South-Easterly in Denmark and Westerly and North-Westerly in Scandinavia.

Sea high off the north-west of France and rough in the western part of the Channel.

Barometer falling in Denmark, Germany, the Netherlands, and the south-east of England, but rising elsewhere. Pressure highest over Spain, with a shallow depression over the north of Sweden and a deep disturbance off the mouth of the Thames. Latter system moving north-eastwards later, but barometer falling slightly over our north-west coasts.

Sunday, July 29.

Weather fair in Scandinavia and the south of France, but cloudy elsewhere, with rain in Scotland, the south of Ireland, and the north-west of France. Heavy rain falling in south of England later.

Temperature fallen in most places, and very low generally. Maximum readings below 60° in the north-west, north, and north-east, but above 65° in some parts of central England.

Wind light from East and North-East over the northern parts of our Islands, but fresh from the Southward at the mouth of the Channel, and moderate from West over Germany, the Netherlands, and the south-east of England. Subsequently veering to the north-westward in the south-west of England.

Sea moderate in the Channel, but slight or smooth elsewhere.

Barometer rising in Sweden, the Netherlands, and the east of England, but falling elsewhere. Deep depression of previous day now lying over the south of Denmark, but new disturbances appearing over our south-west coasts. Two small depressions advancing later over the southern parts of Ireland and England, and barometer falling generally.

Monday, July 30.

Weather fine in the north of Scandinavia and the south of France, but cloudy elsewhere, with rain in many places. Severe thunderstorms occurring over England later, with very heavy falls of rain in the southern suburbs of London.

Temperature risen a little in the north, and also at the Channel stations, but fallen elsewhere. Maximum readings below 60° at all but our southern stations, and below 55° in the north of England.

Wind North-Easterly over Scandinavia and the greater part of the United Kingdom, but Westerly or South-Westerly at our extreme southern and the French stations.

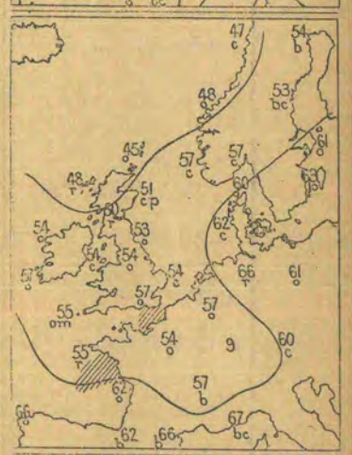
Sea moderate to smooth generally.

Barometer falling generally. Large depression lying over the south of Sweden, with smaller disturbances over the south of England and the mouth of the St. George's Channel. Large system subsequently moving north-westwards, but smaller disturbances advancing slowly eastwards.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending July 23	Scarborough	71	47	64·8	51·9	57·9	−11·8	111	0	5	1·64	+1·03	36	32

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	59	41	54·6	45·4	49·7	− 4·0	54	0	0	—	−0·50	*	*
	Stornoway	58	44	55·0	46·1	50·2	− 4·5	57	0	3	0·18	−0·52	30	26
	Wick	59	39	56·1	44·3	49·8	− 5·4	55	0	3	0·07	−0·44	*	*
	Lairg ⚓	69	41	60·3	45·1	52·2	− 2·8	71	0	5	0·42	−0·26	*	*
	Glencarron ⚓	64	45	58·9	46·6	52·3	− 2·6	72	0	7	1·31†	?	7	6
	Fort Augustus ⚓	66	45	58·9	49·1	53·7	− 4·0	82	0	6	0·56†	?	*	*
1. SCOTLAND, E.	Nairn	63	44	57·7	46·9	51·9	− 5·8	69	0	6	0·73	+0·13	*	*
	Aberdeen	64	43	58·9	47·9	53·0	− 4·2	77	0	2	0·03	−0·65	32	28
	Braemar ⚓	62	40	56·6	44·5	50·1	− 4·6	57	0	6	1·07	+0·34	18‡	16‡
	Ochtertyre ⚓	68	37	61·9	46·1	53·5	− 4·5	81	0	5	0·82	+0·05	*	*
	Leith	66	48	59·9	50·4	54·8	− 3·7	90	0	6	0·51	−0·10	*	*
	Marchmont ⚓	63	45	58·7	48·3	53·1	− 3·5	78	0	6	0·59	−0·20	12	11
2. ENGLAND, N.E.	Alnwick Castle	63	46	57·6	49·9	53·5	− 4·1	81	0	6	0·64	−0·04	*	*
	Durham	72	48	61·3	49·6	55·0	− 3·5	91	0	7	4·12	+3·49	17	15
	Shields	65	48	58·7	51·1	54·6	− 3·8	88	0	5	2·14	+1·54	*	*
	Scarborough ⚓	66	48	60·5	50·4	55·1	− 4·5	92	0	6	1·25	+0·65	18‡	16‡
	York	67	47	62·4	50·7	56·1	− 5·2	99	0	7	2·25	+1·67	21	19
	Spurn Head	67	42	60·4	50·1	54·9	− 5·2	90	0	7	1·47	?	*	*
3. ENGLAND, E.	Hillington ⚓	68	46	63·4	50·8	56·7	− 3·9	103	0	7	1·91	+1·31	29	27
	Yarmouth	68	50	62·9	53·3	57·8	− 3·6	111	0	7	1·60	+1·01	*	*
	Geldeston	69	49	66·1	52·9	59·0	− 2·3	119	0	7	2·73	+2·22	35	32
	Cambridge	69	45	66·6	51·6	58·6	− 4·1	116	0	7	0·94	+0·43	27	25
	Rothamsted	70	47	65·5	52·2	58·4	− 4·0	115	0	7	1·20	+0·60	*	*
	Ingatestone	68	47	65·9	52·4	58·7	− 4·2	117	0	6	2·97	+2·44	28‡	26‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	68	46	62·7	50·7	56·3	− 5·1	100	0	7	1·58	+0·97	24‡	22‡
	Loughborough	69	46	62·6	51·9	56·9	− 5·1	104	0	7	1·25	+0·63	*	*
	Cheadle ⚓	64	45	59·8	48·8	53·9	− 6·4	83	0	6	1·38	+0·65	*	*
	Churchstoke ⚓	65	46	60·2	48·9	54·2	− 6·0	85	0	7	1·80	+1·22	17	16
	Hereford ⚓	69	45	63·1	50·7	56·5	− 5·0	102	0	7	1·21	+0·69	*	*
	Cirencester	66	45	62·9	50·4	56·2	− 5·0	99	0	5	1·57	+0·86	25	23
	Oxford	67	49	64·6	53·1	58·5	− 3·0	116	0	7	1·11	+0·56	27	25
5. ENGLAND, S.	London	71	52	67·7	54·6	60·7	− 2·6	131	0	7	1·66	+1·16	30‡	28‡
	Strathfield Turgiss ⚓	69	48	66·6	53·4	59·5	− 1·9	123	0	7	1·24	+0·73	*	*
	Dungeness	67	55	64·0	56·0	59·7	− 2·0	124	0	6	1·62	+1·20	*	*
	Hastings (St. Leonard's)	65	53	62·6	55·0	58·5	− 2·8	116	0	6	1·84	+1·37	30	28
	Southampton	68	53	65·6	55·0	59·9	− 1·7	125	0	6	1·84	+1·26	25	23
	Hurst Castle	65	54	63·0	56·1	59·3	− 2·0	121	0	6	1·38	+0·89	*	*
	Stowell ⚓	65	48	61·9	52·8	57·0	− 3·6	105	0	7	3·05	?	14‡	13‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	65	46	65·4	50·8	57·6	+ 0·8	109	0	6	0·84†	−0·43	*	*
	Glasgow	66	46	60·7	50·1	55·0	− 2·6	91	0	5	1·05	+0·22	13	12
	Ardrossan	65	47	60·0	51·7	55·4	− 2·3	94	0	6	0·99	+0·29	*	*
	Glenlee ⚓	67	42	60·6	49·6	54·7	− 3·2	89	0	7	1·55	?	*	*
	Douglas (Isle of Man)	62	45	58·4	49·7	53·8	− 3·9	83	0	6	1·66	+0·96	23	21
7. ENGLAND, N.W.	Newton Reigny (Penrith)	65	43	59·6	48·9	53·9	− 4·5	83	0	5	1·97	+1·27	16	14
	Barrow-in-Furness	63	49	59·4	52·7	55·8	− 3·9	97	0	7	2·12	+1·42	*	*
	Stonyhurst	66	47	60·7	50·7	55·4	− 3·8	94	0	6	1·95	+0·93	18	16
	Blackpool ⚓	66	48	61·9	52·6	56·9	− 3·3	104	0	6	2·07	+1·37	12	11
	Manchester	68	46	62·0	50·7	56·0	− 4·4	98	0	6	1·39	+0·52	*	*
	Liverpool Obs^{y} (Bidston)	68	50	62·0	52·6	57·0	− 3·7	105	0	6	1·66	+1·00	*	*
	Llandudno ⚓	66	49	60·9	53·4	56·9	− 3·8	104	0	6	1·74	+1·14	19	17
	Holyhead	63	50	59·7	52·7	56·0	− 3·5	98	0	7	1·19	+0·64	*	*
8. ENGLAND, S.W.	Llandovery	66	46	63·7	51·1	57·0	− 3·7	105	0	7	1·78	+0·87	*	*
	Pembroke	61	54	59·3	54·4	56·7	− 3·2	103	0	6	1·17	+0·62	31	29
	Arlington (N. Devon)	66	50	61·9	51·1	56·0	− 4·9	98	0	6	0·98	−0·19	*	*
	Cullompton ⚓	68	48	63·7	52·9	57·9	− 3·5	111	0	7	3·01	+2·39	17	16
	Falmouth	64	53	62·3	54·0	57·9	− 3·5	111	0	7	2·23	+1·51	36	34
	Plymouth	67	54	63·0	55·7	59·1	− 2·6	120	0	7	1·80	+1·19	27	25
	Prawle Point	62	51	59·6	53·0	56·1	− 3·8	99	0	6	0·91	?	*	*
9. IRELAND, N.	Malin Head	62	49	57·4	50·9	53·9	− 3·0	83	0	4	1·40	?	*	*
	Londonderry	67	46	62·0	49·8	55·5	− 3·1	95	0	7	3·22	+2·44	*	*
	Mullaghmore	64	48	60·9	51·3	55·8	− 3·8	97	0	6	1·68	+0·83	*	*
	Belmullet	64	47	60·0	50·3	54·8	− 2·9	90	0	4	0·41	?	*	*
	Markree Castle	64	41	61·3	47·5	53·9	− 5·7	83	0	4	1·89	+1·14	30	27
	Brookeborough	66	40	60·7	48·2	54·0	− 5·8	84	0	5	2·63	?	*	*
	Armagh	68	47	61·6	50·2	55·5	− 4·3	95	0	5	2·72	+2·03	18	16
	Donaghadee	66	50	60·0	52·6	56·0	− 2·2	98	0	5	2·73	+2·11	*	*
	Edgeworthstown	67	43	62·1	47·7	54·4	− 5·4	87	0	6	2·21	+1·41	*	*
10. IRELAND, S.	Dublin	67	47	60·4	52·2	56·0	− 3·9	98	0	7	1·49	+0·91	26	24
	Parsonstown	66	46	62·6	50·1	55·9	− 3·4	97	0	5	1·84	+1·14	29	27
	Kilkenny	67	48	62·6	51·6	56·7	− 3·3	103	0	6	1·38	+1·31	*	*
	Waterford	67	48	64·0	51·0	57·1	− 3·4	106	0	6	1·86	+1·21	*	*
	Roche's Point	63	51	61·7	53·0	57·1	− 3·6	103	0	7	2·92	+2·20	*	*
	Valencia	64	49	62·7	51·7	56·8	− 2·2	104	0	7	0·95	+0·03	47	44
	Killarney	70	45	63·1	49·6	55·9	− 3·6	97	0	7	1·19	?	*	*
	Foynes	65	47	62·8	49·2	55·3	− 3·9	93	0	6	2·83	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	64	52	62·3	54·3	58·0	− 2·7	112	0	7	1·62	+1·10	*	*
	Jersey (Noirmont)	67	54	64·3	56·4	60·1	− 1·8	127	0	7	1·54	+1·04	27	25

Stations marked ⚓ are in connection with the Royal Meteorological Society, and those marked ⚓ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.: ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 31.] *Second Series.* WEEK ENDING MONDAY, 6TH AUGUST, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

DISTRICTS. (See p. 124.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
	°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.														
0. SCOTLAND, NORTH	63	35	58·1	43·5	50·4	4 below.	59	−29	0	0	870	−173	711	+201
1. SCOTLAND, EAST	69	34	61·6	43·6	52·1	5 below.	71	−37	0	0	1062	−336	700	+157
2. ENGLAND, N.E.	67	38	60·4	46·8	53·2	6 below.	78	−38	0	0	1111	−375	555	+ 73
3. ENGLAND, EAST	70	40	62·9	48·2	55·1	7 below.	92	−36	0	0	1443	−304	661	+154
4. MIDLAND COUNTIES	73	38	63·7	46·8	54·7	6 below.	89	−35	0	0	1398	−359	654	+150
5. ENGLAND, SOUTH	71	41	63·7	50·7	56·8	5 below.	104	−32	0	0	1494	−385	577	+204
Principal Grazing, &c. Districts														
6. SCOTLAND, WEST	65	33	60·0	45·4	52·2	5 below.	71	−38	0	0	1227	−249	505	+107
7. ENGLAND, N.W.	67	36	60·9	47·9	54·0	6 below.	84	−34	0	0	1278	−285	500	+117
8. ENGLAND, S.W.	71	38	63·1	49·4	55·8	5 below.	97	−29	0	0	1441	−350	487	+254
9. IRELAND, NORTH	68	36	61·2	47·0	53·7	5 below.	82	−29	0	0	1319	−232	417	+ 67
10. IRELAND, SOUTH	74	36	64·1	48·3	55·7	4 below.	96	−23	0	0	1560	−217	352	+113
— CHANNEL ISLANDS	66	50	62·8	53·4	57·8	4 below.	111	−23	0	0	1621	−287	247	+154

Rainfall. Bright Sunshine.

DISTRICTS. (See p. 124.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
		10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.													
0. SCOTLAND, NORTH	5	6	0 (average).	140	+ 8	21·7	−1·7	34	30	880	+ 35	30	+ 1
1. SCOTLAND, EAST	4	3	4 less.	123	+13	18·3	+1·3	45	40	890	− 74	31	− 2
2. ENGLAND, N.E.	5	6	0 (average).	116	+ 9	17·1	+2·2	25	23	747	−139	26	− 5
3. ENGLAND, EAST	5	12	7 more.	119	+ 9	15·9	+1·7	30	29	796	−278	28	−10
4. MIDLAND COUNTIES	4	3	3 less.	110	+ 2	15·4	−0·6	37	35	743	−201	26	− 7
5. ENGLAND, SOUTH	5	11	6 more.	112	+ 9	17·2	+2·2	32	31	759	−253	27	− 9
Principal Grazing, &c. Districts.													
6. SCOTLAND, WEST	4	8	0 (average).	115	− 6	25·0	+0·9	50	46	921	0	32	0
7. ENGLAND, N.W.	4	11	4 more.	118	+ 6	17·1	−2·3	43	42	812	−116	28	− 4
8. ENGLAND, S.W.	4	5	3 less.	121	+ 3	20·0	−3·2	44	41	954	−130	34	− 4
9. IRELAND, NORTH	5	9	2 more.	121	−14	22·0	+2·2	37	34	811	− 58	28	− 2
10. IRELAND, SOUTH	4	5	3 less.	112	−15	22·5	+0·4	40	37	935	− 42	33	− 1
— CHANNEL ISLANDS	3	4	2 less.	135	+10	18·4	+1·2	55	53	1031	−231	37	− 9

General Remarks.

Weather has remained in a cool, changeable, showery state, but the amount of cloud and rainfall has been, as a rule, considerably less than that recorded of late. Thunderstorms occurred in many parts of the country during the early part of the week.

Temperature has again been below the mean in all districts, the deficit ranging from 4° in "Scotland, N.", "Ireland, S.", and the "Channel Islands" to 7° in "England, E." The highest temperatures were recorded on the 2nd or 3rd August, when the thermometer over England rose to a little above 70°; at the close of the week, however, the maximum readings were below 65° in many parts of the Kingdom. The lowest temperatures were recorded during the early part of the week at our northern stations, and towards the close of the week at the southern stations, the thermometer falling below 40° in all districts excepting "England, E." and "England, S." In "Scotland, E." it fell to 34°, while in "Scotland, W." a minimum of 33° was registered.

Rainfall has varied greatly, not only in different parts of the Kingdom, but in closely adjacent localities. In some of the western districts an excess is shown, owing to a somewhat heavy fall which occurred on the 4th August, while in the east and south of England a similar result was brought about by the torrential rains which visited some localities on the night of the 1st. At Ingatestone the amount measured on the morning of the 2nd was as much as 3·20 inches.

Bright sunshine has been more prevalent than it was last week, the percentage of the possible amount ranging from 23 in "England, N.E." to 46 in "Scotland, W.", and 53 in the "Channel Islands."

Depressions observed.—At the commencement of the week, pressure was highest over Spain, and lowest to the northward of our Islands, so that the prevailing winds were Westerly. On the 31st July and 1st August, however, a small depression over the south of England, occasioned considerable irregularity in the direction of the wind over our southern districts, with heavy local falls of rain. On the 2nd, this small system dispersed, but a larger disturbance appeared shortly afterwards on our extreme northern coasts, and on the 4th and 5th this moved south-eastwards to Denmark, the wind in its rear veering to the Northward and blowing strongly in many places. At the close of the week, another small depression had appeared off our extreme north west coasts, but the high pressure system in the south was inclined to extend northwards, and the general appearance showed signs of improvement.

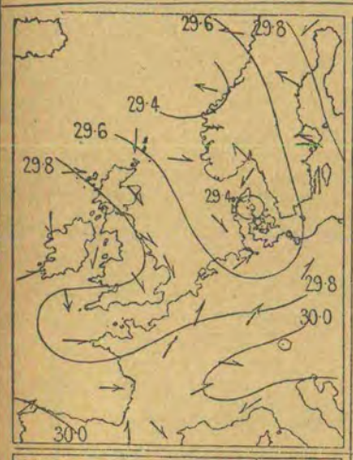
A 55313. 350.—8/88. Wt. 37. E. & S.

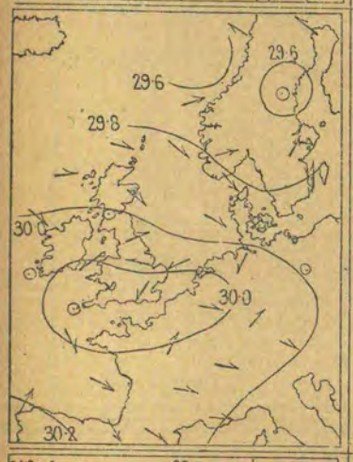
II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

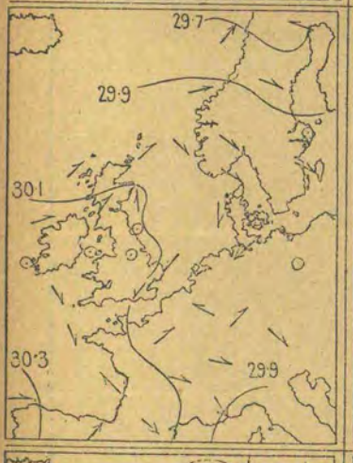
Synoptic Charts.

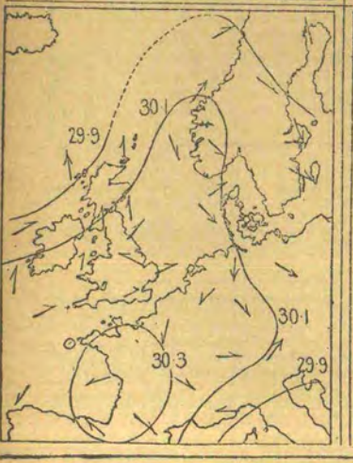
PRESSURE AND WIND.

8 a.m.

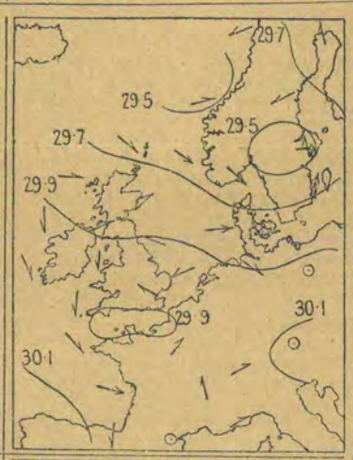


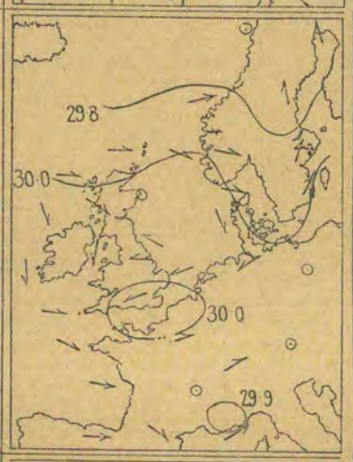


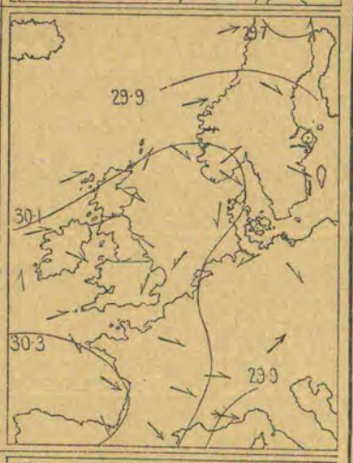


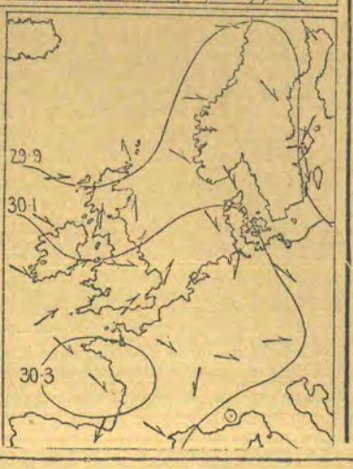


6 p.m.









Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Tuesday, July 31.

Weather fine in the west and north of our Islands, but cloudy elsewhere, with rain on the eastern shores of the North Sea and passing showers at some of our southern stations. Heavy rain falling in the south at night.

Temperature risen over Germany and the north of Scandinavia, but fallen elsewhere. Maximum readings below 60° at many of our northern and eastern stations.

Wind light or moderate from the Northward in our Islands, but Westerly or South-Westerly in France and Germany, and South-Easterly in Scandinavia. Subsequently veering to East in the south of England.

Sea slight or smooth generally.

Barometer rising at all but the Norwegian and Danish stations. Pressure highest over the south of Spain, with a depression over the west of Norway, a well-marked secondary disturbance over Denmark, and a small shallow system near the mouth of the Channel. Rise extending later to eastern shores of North Sea.

Wednesday, August 1.

Weather fair over the greater part of our Islands, but rainy at our extreme south-eastern as well as at many of the Continental stations. Thunderstorms and heavy rain occurring later in several parts of England; over an inch of rain measured in London.

Temperature risen slightly in our Islands, but fallen elsewhere. Maximum readings again below 60° at many of our northern and eastern stations.

Wind Easterly or North-Easterly over Holland and the greater part of England, but chiefly Westerly elsewhere; strong in force on the eastern shores of the North Sea.

Sea slight or smooth generally.

Barometer risen at all but the northern Scandinavian stations. Pressure highest over Spain, and lowest in depressions lying over and to the north-westward of Scandinavia, but small shallow disturbance lying over the eastern part of the Channel. Small system moving eastwards later, and barometer continuing to rise generally.

Thursday, August 2.

Weather fine over the greater part of our Islands as well as in Denmark, the south of Scandinavia, and the west of France, but cloudy elsewhere, with rain in many places. Showers falling later at some of our north-western and northern stations.

Temperature fallen in Scandinavia and France, but changed irregularly elsewhere. Maxima slightly exceeding 70° at some of the midland stations, but below 60° in the extreme north of Scotland, and also on the north-east coast of England.

Wind South-Westerly in the north of our Islands and the west of Norway, but North-Easterly over the Netherlands and south-east of England, and North-Westerly on our south-west coasts.

Sea moderate to smooth.

Barometer rising at all but the German stations. Anticyclone lying off the north-west of Spain, with a large depression over the north of Scandinavia, and a small shallow disturbance over the eastern part of the Channel. Latter system dispersing later, but new depressions beginning to approach our extreme north-west coasts.

Friday, August 3.

Weather dull and rainy on our extreme north-west coasts, and also at some of the German stations, but fair or fine elsewhere. Rain falling later in the west and north generally, and solar halos seen in many parts of England.

Temperature risen a little in most places, but still rather low for time of year. Maximum readings slightly exceeding 70° in the south-east of England, but below 60° at our extreme north-western and northern stations.

Wind moderate to strong from the South-Westward or Southward on the west coasts of our Islands and Norway, but light and variable at our south-eastern stations, and North-Westerly in Denmark, Germany, and the east of France. Subsequently veering to the westward on our western coasts.

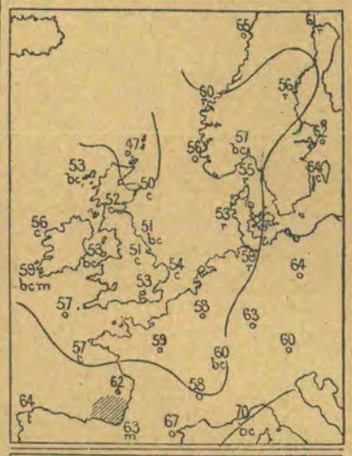
Sea rough at Stornoway, but moderate to smooth elsewhere.

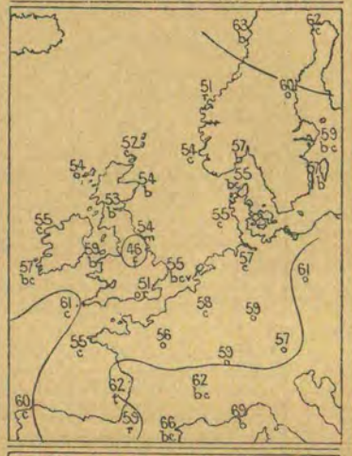
Barometer falling in Ireland and Scotland, but rising elsewhere. Anticyclone lying over France, with a depression off the north-west of Scotland and another over Germany. Scotch disturbance subsequently moving north-eastwards, and barometer rising in west.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

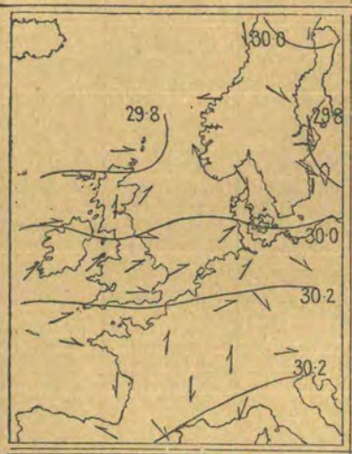
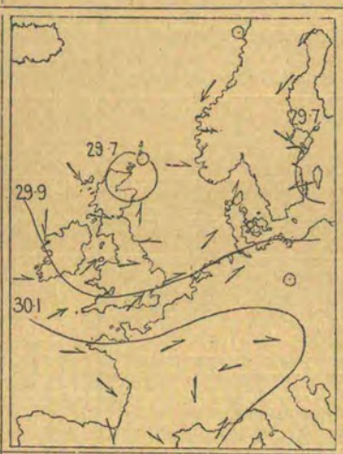
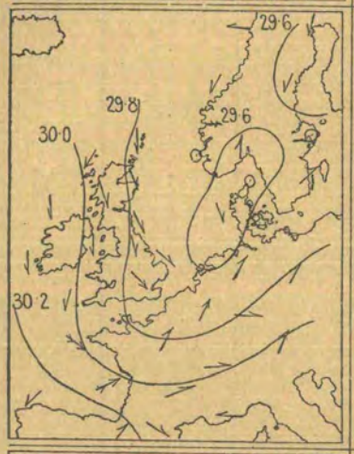
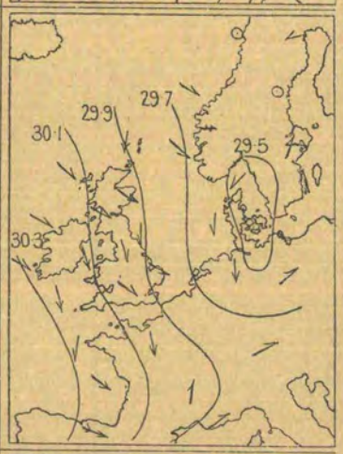
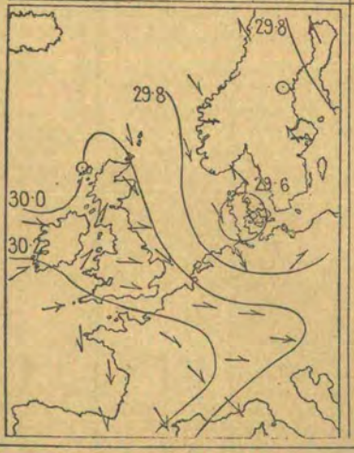




SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.	Weather	Synoptic Charts. TEMPERATURE AND WEATHER at 8 a.m.
		**Saturday, August 4.** *Weather* fine in Germany, France, and the south of Norway, but cloudy elsewhere, with showers in many parts of our Islands. Rain falling generally later,—heavily at some of our north-western and northern stations. *Temperature* fallen a little on our north and north-east coasts, but risen elsewhere. Maximum readings below 65° in all districts excepting the south-east of England. *Wind* chiefly Westerly and South-Westerly, but South-Easterly in the west of Norway and North-Easterly in the south of France ; moderate or fresh in force generally. *Sea* moderate to smooth. *Barometer* falling at all but the German and French stations. Anticyclonic systems lying over the Bay of Biscay and South Germany, with a depression to the northward of our Islands and another over the Baltic. New disturbance appearing later off the north-east of Scotland.	
		**Sunday, August 5.** *Weather* fine in our Islands, the west of Norway, and the south of France, but cloudy elsewhere; with rain in Denmark, the Netherlands, and the west of France. Rain falling later at some of our western stations. *Temperature* fallen a little in our Islands, but risen at most of the Continental stations. Maximum readings below 65° in most places and below 60° on our extreme north and north-west coasts. *Wind* strong from North and North-West in our Islands, but moderate from South-West over the Netherlands, Germany, and the east of France. Subsequently falling light on our western coasts. *Sea* rather rough on the more exposed parts of our coasts. *Barometer* rising in the west and north of our Islands, but falling elsewhere. Pressure highest off the north-west of Spain, with a depression over the Gulf of Bothnia, and another over the eastern shores of the North Sea. Both disturbances moving eastwards later, and barometer rising generally.	
		**Monday, August 6.** *Weather* fine in France, and fair in the eastern parts of Great Britain, but dull elsewhere, with rain at the Danish and many of our western stations. Slight rain falling later in all parts of the United Kingdom. *Temperature* fallen a little in most places. Maximum readings below 65° in nearly all districts, but thermometer rising to 74° at Roche's Point. *Wind* moderate South-Westerly on our western coasts, but North-Westerly over the North Sea and adjacent coasts, and Northerly in the west of France. *Sea* rather rough in the southern part of the North Sea, but moderate to smooth elsewhere. *Barometer* rising at all but the Irish and Scotch stations. Anticyclone lying over the Bay of Biscay and the west of France, with a well-defined depression over Denmark, and a shallower one off the west of Scotland. Former disturbance subsequently disappearing, but latter moving slowly north-eastwards.	

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 121 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	59	43	56·0	45·4	50·4	− 3·3	59	0	4	0·07	−0·51	*	*
	Stornoway	60	41	57·7	44·3	50·6	− 4·1	60	0	6	0·80	+0·06	42	38
	Wick	60	37	58·3	41·4	49·3	− 5·8	54	2	6	0·93	+0·41	*	*
	Lairg ℳ	63	35	58·4	41·0	49·2	− 4·7	55	3	5	0·46	−0·19	*	*
	Glencarron ℳ	60	40	57·2	44·7	50·6	− 3·3	60	0	6	1·16†	?	25	22
	Fort Augustus ℳ	63	37	61·0	44·4	52·2	− 5·3	71	0	5	0·34†	?	*	*
1. SCOTLAND, E.	Nairn	65	40	61·3	45·0	52·7	− 4·8	75	0	3	0·16	−0·44	*	*
	Aberdeen	62	41	59·6	44·0	51·3	− 5·8	65	0	6	0·62	−0·06	49	44
	Braemar ℳ	62	34	58·3	40·6	48·9	− 5·6	54	4	7	0·70	−0·10	41‡	37‡
	Ochtertyre ℳ	69	38	65·9	44·0	54·3	− 3·3	86	0	2	0·11	−0·67	*	*
	Leith	67	41	64·4	45·0	54·1	− 4·3	85	0	3	0·06	−0·54	*	*
	Marchmont ℳ	65	40	60·1	42·9	51·0	− 5·5	63	0	2	0·10	−0·69	44	40
2. ENGLAND, N.E.	Alnwick Castle	64	43	58·3	47·3	52·5	− 4·7	74	0	5	0·81	+0·13	*	*
	Durham	65	38	62·2	44·1	52·6	− 5·2	74	0	6	0·72	+0·09	32	29
	Shields	64	44	59·6	45·6	52·7	− 5·3	75	0	3	0·69	+0·07	*	*
	Scarborough ℳ	63	44	59·1	47·1	52·7	− 6·7	75	0	5	0·73	+0·13	21‡	19‡
	York	67	43	63·0	45·1	53·5	− 7·2	81	0	5	0·48	−0·10	23	24
	Spurn Head	67	49	60·0	50·4	54·9	− 5·0	90	0	4	0·36	?	*	*
3. ENGLAND, E.	Hillington ℳ	69	40	62·4	45·8	53·6	− 6·8	81	0	6	0·80	+0·20	36	34
	Yarmouth	66	46	61·6	50·3	55·6	− 5·6	95	0	5	0·54	0·00	*	*
	Geldeston	68	43	62·6	47·7	54·7	− 6·5	89	0	3	0·50	+0·02	33	31
	Cambridge	70	46	64·9	48·3	56·1	− 6·4	99	0	4	0·37	−0·15	32	30
	Rothamsted	69	42	63·4	48 0	55·2	− 6·8	92	0	6	1·39	+0·79	*	*
	Ingatestone	69	45	62·4	48·9	55·3	− 7·4	93	0	4	3·59	+3·00	20‡	19‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	69	39	65·9	45·0	54·8	− 6·5	90	0	5	0·39	−0·21	35‡	33‡
	Loughborough	72	45	65·7	48·1	56·4	− 5·5	101	0	3	0·32	−0·23	*	*
	Cheadle ℳ	65	45	60·4	47·1	53·4	− 6·6	80	0	4	0·46	−0·31	*	*
	Churchstoke ℳ	67	38	62·6	43·5	52·5	− 7·5	74	0	4	0·26	−0·33	44	41
	Hereford ℳ	73	41	66·4	47·3	56·3	− 5·1	100	0	5	0·25	−0·29	*	*
	Cirencester	67	40	62·3	47·0	54·2	− 6·8	85	0	4	0·19	−0·53	35	33
	Oxford	68	47	62·7	49·3	55·6	− 5·8	95	0	5	0·49	−0·06	33	31
5. ENGLAND, S.	London	71	44	63·7	50·1	56·5	− 6·7	102	0	5	1·74	+1·24	25‡	24‡
	Strathfield Turgiss ℳ	70	41	64·8	48·7	56·3	− 5·0	100	0	6	1·27	+0·76	*	*
	Dungeness	65	46	63·7	52·4	57·7	− 4·0	110	0	5	0·24	−0·19	*	*
	Hastings (St. Leonard's)	66	48	62·4	52·1	56·9	− 4·6	104	0	5	3·04	+2·55	33	31
	Southampton	70	47	64·8	50·1	57·0	− 4·6	105	0	4	1·36	+0·77	31	30
	Hurst Castle	67	49	64·9	52·6	58·0	− 3·3	112	0	4	0·08	−0·42	*	*
	Stowell ℳ	66	43	62·7	48·8	55·3	− 5·1	93	0	5	0·21	?	39‡	37‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	61	42	59·8	46·1	52·5	− 4·6	74	0	3	1·02†	−0·15	*	*
	Glasgow	64	41	60·7	45·3	52·5	− 5·0	74	0	2	0·22	−0·62	48	44
	Ardrossan	61	42	58·6	47·4	52·7	− 5·0	75	0	3	0·27	−0·53	*	*
	Glenlee ℳ	65	33	60·2	42·6	50·9	− 6·9	62	0	6	1·06	?	*	*
	Douglas (Isle of Man)	64	41	60·5	45·6	52·6	− 5·1	74	0	4	1·23	+0·48	52	48
7. ENGLAND, N.W.	Newton Reigny (Penrith)	64	36	60·2	42·3	50·7	− 7·7	61	0	4	0·75	+0·05	46	42
	Barrow-in-Furness	62	46	59·7	49·4	54·2	− 5·6	85	0	4	1·24	+0·49	*	*
	Stonyhurst	64	42	60·5	46·3	53·0	− 6·3	77	0	4	1·73	+0·70	35	33
	Blackpool ℳ	62	44	60·5	48·3	54·0	− 6·3	84	0	3	1·61	+0·91	50	46
	Manchester	66	44	62·0	47·1	54·1	− 6·4	85	0	5	1·17	+0·35	*	*
	Liverpool Obsy (Bidston)	65	48	62·1	49·7	55·5	− 5·2	95	0	4	0·76	+0·12	*	*
	Llandudno ℳ	67	44	61·6	43·6	54·7	− 6·0	89	0	4	0·88	+0·28	51	48
	Holyhead	62	48	60·6	51·3	55·7	− 3·9	96	0	4	0·59	−0·01	*	*
8. ENGLAND, S.W.	Llandovery	71	38	65·7	45·4	54·9	− 5·6	90	0	5	0·57	−0·39	*	*
	Pembroke	62	49	60·7	52·7	56·5	− 3·2	102	0	3	0·17	−0·44	52	49
	Arlington (N. Devon)	67	40	62·0	45·6	53·3	− 7·1	79	0	5	0·49	−0·74	*	*
	Cullompton ℳ	68	40	64·8	47·4	55·6	− 5·8	95	0	3	0·11	−0·51	35	33
	Falmouth	65	49	61·7	51·4	56·2	− 5·0	99	0	3	0·99	+0·22	47	45
	Plymouth	71	47	65·1	52·2	58·3	− 3·4	114	0	4	0·63	0·00	40	38
	Prawle Point	64	49	61·4	51·4	56·1	− 3·7	99	0	5	0·83	?	*	*
9. IRELAND, N.	Malin Head	62	48	57·7	49·7	53·5	− 3·6	81	0	5	1·24	?	*	*
	Londonderry	66	41	62·2	46·3	53·8	− 4·8	83	0	6	1·17	+0·38	*	*
	Mullaghmore	63	45	61·0	49·4	54·9	− 4·5	90	0	6	1·21	+0·40	*	*
	Belmullet	62	42	60·1	50·6	55·1	− 2·6	92	0	4	0·48	?	*	*
	Markree Castle	65	36	61·7	43·4	52·0	− 7·5	70	0	4	0·73	−0·06	38	35
	Brookeborough	65	33	61·6	43·0	51·7	− 7·9	68	0	5	0·97	?	*	*
	Armagh	64	38	62·3	45·0	53·1	− 6·5	78	0	5	0·79	+0·14	33	33
	Donaghadee	61	48	60·4	50·4	55·1	− 3·1	52	0	5	0·83	+0·18	*	*
	Edgeworthstown	68	42	63·6	45·4	54·0	− 5·6	84	0	5	0·72	−0·08	*	*
10. IRELAND, S.	Dublin	67	46	63·6	49·2	56·0	− 3·8	98	0	3	0·56	−0·04	41	38
	Parsonstown	65	42	63·4	45·7	54·0	− 5·4	84	0	4	0·16	−0·57	33	31
	Kilkenny	68	42	64·4	47·4	55·4	− 4·6	94	0	4	0·57	−0·04	*	*
	Waterford	74	42	66·6	47·4	56·4	− 4·0	101	0	3	0·25	−0·46	*	*
	Roche's Point	74	48	64·0	50·9	57·1	− 3·4	106	0	4	0·30	−0·45	*	*
	Valencia	67	43	63·6	49·7	56·2	− 3·0	99	0	4	0·55	−0·42	46	43
	Killarney	70	36	64·2	46·4	54·8	− 4·9	93	0	5	0·87	?	*	*
	Foynes	66	43	62·8	49·4	55·7	− 3·4	96	0	5	0·55	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	66	52	62·0	53·9	57·7	− 3·1	110	0	3	0·42	−0·11	*	*
	Jersey (Noirmont)	65	50	63·6	52·9	57·9	− 4·2	111	0	3	0·29	−0·21	55	53

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked $ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 32.] *Second Series.* WEEK ENDING MONDAY, 13TH AUGUST, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1863–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 128.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	67	39	58·6	48·6	53·3	2 below.	79	− 9	0	0	949	−185	711	+201
	1. SCOTLAND, EAST	72	44	62·9	50·5	56·4	0 (average).	101	− 7	0	0	1163	−347	700	+157
	2. ENGLAND, N.E.	79	45	66·3	53·8	59·7	1 above.	124	+ 8	0	0	1235	−367	555	+ 73
	3. ENGLAND, EAST	85	51	73·8	56·0	64·4	3 above.	157	+29	0	0	1600	−274	661	+154
	4. MIDLAND COUNTIES	84	45	72·0	54·7	62·8	2 above.	146	+22	0	0	1544	−338	654	+150
	5. ENGLAND, SOUTH	85	51	70·3	56·9	63·2	2 above.	148	+12	0	0	1642	−374	577	+204
Principal Grazing &c. Districts	6. SCOTLAND, WEST	68	49	61·7	53·0	57·1	0 (average).	106	− 3	0	0	1333	−255	505	+107
	7. ENGLAND, N.W.	77	51	65·5	55·4	60·1	0 (average).	127	+ 9	0	0	1405	−276	500	+117
	8. ENGLAND, S.W.	79	36	66·1	55·1	60·3	0 (average).	128	+ 2	0	0	1569	−348	487	+254
	9. IRELAND NORTH	68	48	63·2	53·2	57·9	1 below.	111	0	0	0	1430	−233	417	+ 67
	10. IRELAND, SOUTH	72	48	65·9	54·8	60·0	1 above.	126	+ 7	0	0	1686	−209	352	+113
	— CHANNEL ISLANDS	79	52	67·4	56·8	61·8	0 (average).	139	+ 4	0	0	1760	−285	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 128.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of in.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	6	11	4 more.	146	+10	22·8	−1·3	5	5	835	+ 17	29	0
	1. SCOTLAND, EAST	5	5	3 less.	128	+13	18·8	+1·0	12	11	902	−100	30	− 3
	2. ENGLAND, N.E.	3	2	4 less.	119	+ 8	17·3	+1·8	25	24	772	−153	26	− 5
	3. ENGLAND, EAST	1	less than ½	5 less.	120	+ 7	15·9	+1·1	42	41	838	−277	28	−10
	4. MIDLAND COUNTIES	2	1	6 less.	112	0	15·5	−1·2	42	40	785	−199	26	− 7
	5. ENGLAND, SOUTH	1	less than ½	5 less.	113	+ 7	17·2	+1·7	46	45	805	−252	27	− 9
Principal Grazing &c. Districts	6. SCOTLAND, WEST	6	10	5 less.	121	− 4	26·0	+0·7	16	15	937	− 26	31	− 1
	7. ENGLAND, N.W.	3	4	4 less.	121	+ 5	17·5	−2·7	30	29	842	−123	28	− 4
	8. ENGLAND, S.W.	3	2	7 less.	124	+ 2	20·2	−3·8	28	28	982	−148	33	− 5
	9. IRELAND, NORTH	5	8	1 more.	126	−14	22·8	+2·2	19	18	830	− 70	28	− 2
	10. IRELAND, SOUTH	3	3	5 less.	115	−16	22·8	−0·1	27	26	962	− 54	33	− 1
	— CHANNEL ISLANDS	3	1	4 less.	138	+ 8	18·5	+0·7	58	57	1119	−232	38	− 8

General Remarks.

Weather has continued cold, rainy, and unseasonable in the north-western and northern parts of the Kingdom, but in all other districts a decided improvement has taken place, fine and dry conditions being generally prevalent.

Temperature has again been below the mean in "Scotland, N." and "Ireland, N.", but in most of the other northern and western districts it has just equalled the mean, while over the eastern, central, and southern parts of England it has varied from 1° to 3° above. The highest of the maxima, which were recorded in most places either on the 9th or 10th, ranged from 85° in "England, S." and "England, E.", and 84° in the "Midland Counties", to 79° in "England, N.E.", "England, S.W.", and the "Channel Islands", and to between 67° and 77° elsewhere. The lowest of the minima, which were registered on somewhat irregular dates, ranged from 39° to 49° in Scotland, and from 44° to 51° in most parts of England, while in Ireland the minimum was 48°, and in the "Channel Islands" 52°. In "England, S.W." (at Llanquoery) the sheltered thermometer during the night of the 12th—13th descended to 36°. During the night of the 9th—10th the thermometer did not fall below 63° at several of our southern and south-eastern stations, while in London the minimum was no lower than 65°.

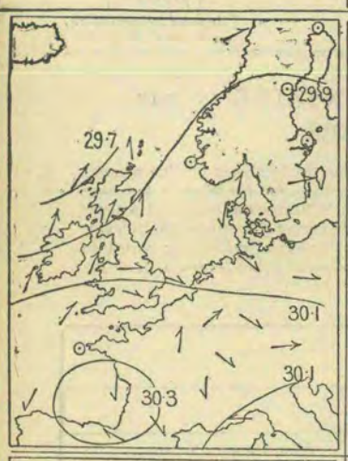
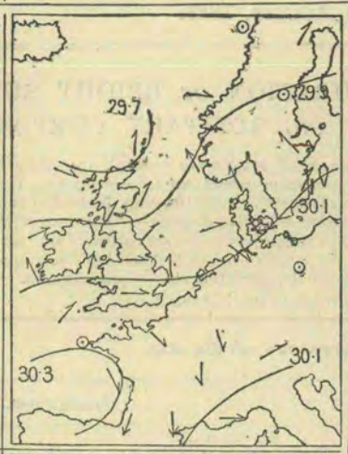
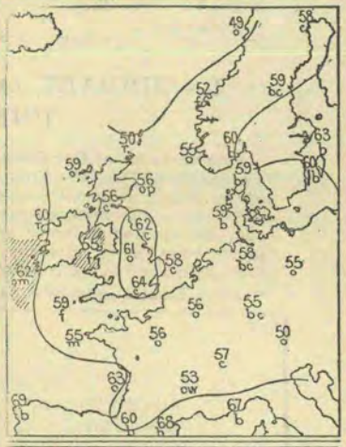
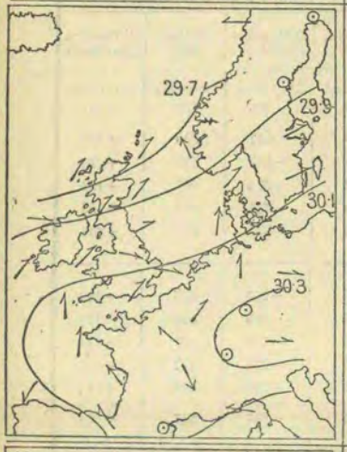
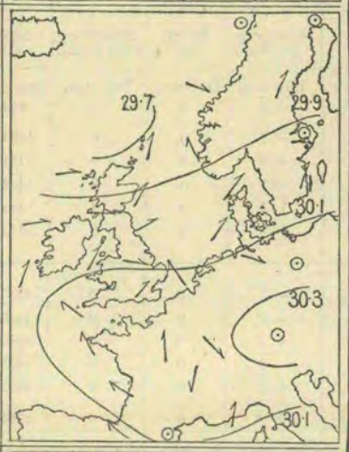
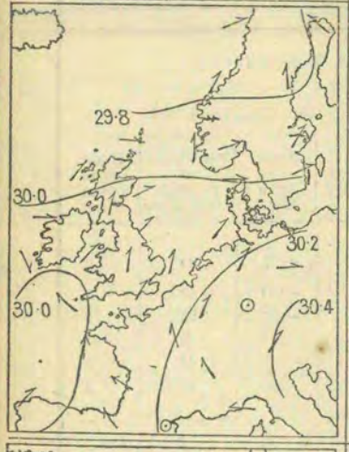
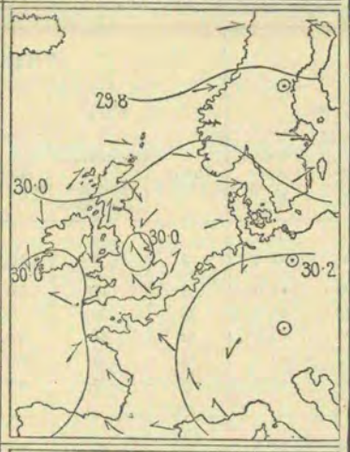
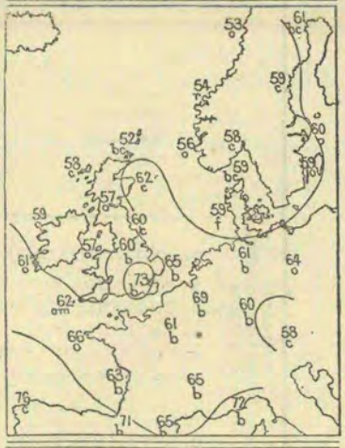
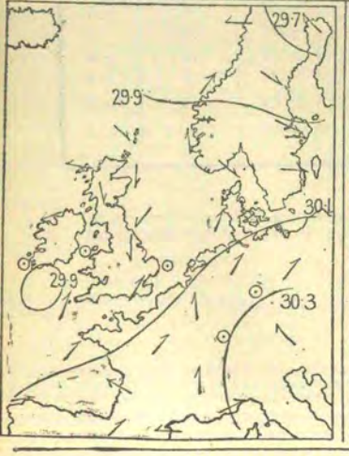
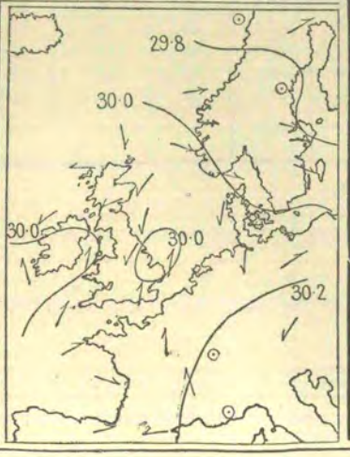
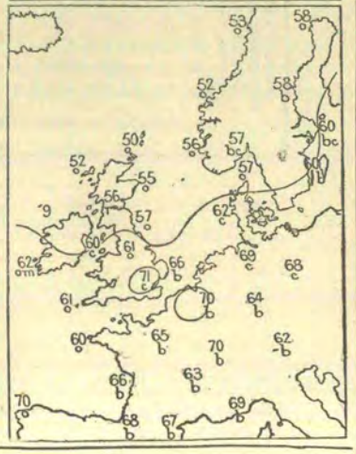
Rainfall has been rather more than the mean in "Scotland, N." and "Ireland, N.", but considerably less in all other districts. Over eastern, central, and southern England the fall has been very slight.

Bright sunshine shows a decided increase over the greater part of England, but a decrease over Ireland, Scotland, and the west of England. The percentage of the possible amount of duration ranged from 5 to 15 in Scotland, from 18 to 26 in Ireland, and from 24 to 45 over England. In the "Channel Islands" the percentage was 57.

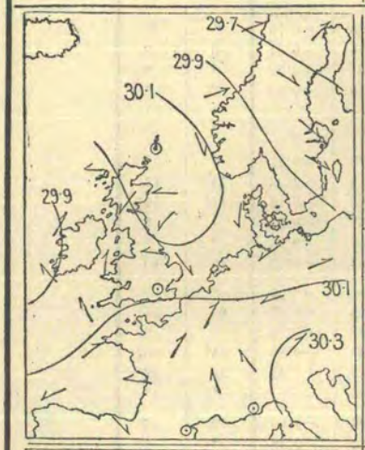
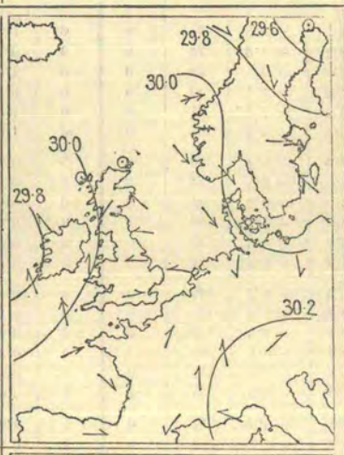
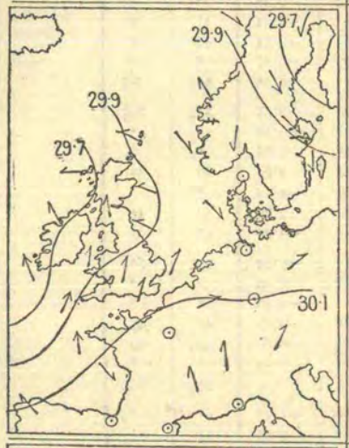
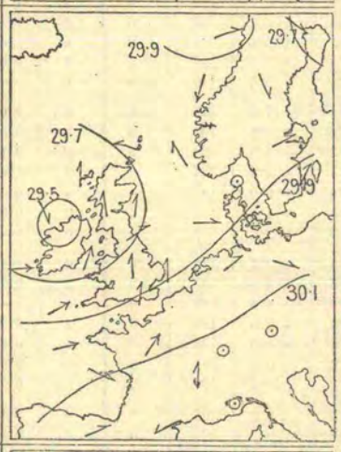
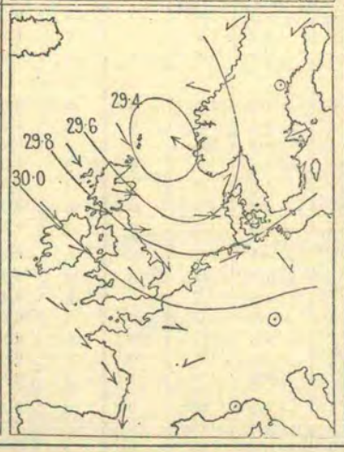
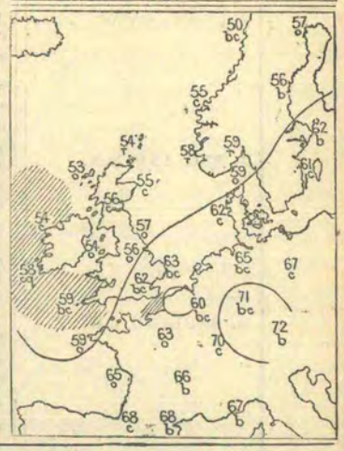
Depressions observed.—During the earlier part of the period the distribution of pressure continued anticyclonic to the southward of our Islands, while some depressions skirted our extreme north-western and northern coasts. As the week advanced, however, the high-pressure area moved more to the eastward, and some small shallow disturbances appeared over England from the south-westward. Towards the end of the period these had dispersed, but the centre of a well-defined and rather deep depression travelled north-eastwards over our more northern districts, and occasioned strong winds or moderate gales from the Westward and North-Westward on all our north-western and northern coasts.

A 55386. 350.—8/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, August 7.** *Weather* fine in Sweden, Denmark, and the east of England, but cloudy elsewhere, with fog over the St. George's, Bristol, and English Channels, and showers at several of the Irish and Scotch stations. *Temperature* risen generally; thermometer reaching 79° in London and at Cambridge and 80° at Loughborough, but remaining below 65° at most of our western stations. *Wind* fresh from South-West or South on our western and northern coasts, but light from West in the east and south, and variable in Scandinavia and France. Subsequently veering to the Westward on our extreme western coasts. *Sea* rather rough at Holyhead and Valencia, but moderate to smooth elsewhere. *Barometer* falling in the west and north of our Islands and the west of France, but rising elsewhere. Anticyclone lying over the Bay of Biscay, with a depression off the north-west of Scotland. Depression subsequently moving north-eastwards, and barometer rising in west.	
		**Wednesday, August 8.** *Weather* still foggy over the English and Bristol Channels, and rainy at Skudesnaes, Fanö, and Stornoway, but fine elsewhere. *Temperature* changed little and irregularly. Maximum readings again exceeding 75° over the inland parts of England, but below 65° at several of our western stations. *Wind* South-Easterly in the west of France, but South-Westerly in our Islands and Southerly on the eastern shores of the North Sea; light or moderate in force in most places. Subsequently veering to west on our western coasts. *Sea* moderate to smooth. *Barometer* rising over Ireland, England, and Germany, but falling elsewhere. Large anticyclone lying over Germany, and large area of low pressure to the northward of our Islands. Low pressure system subsequently moving northwards, and barometer rising on our northern coasts.	
		**Thursday, August 9.** *Weather* dull and unsettled at our western and most of the Scandinavian stations, but fine in most other parts of Western Europe. Thunder and lightning occurring in the south of Ireland at night. *Temperature* risen generally. Maximum readings again below 65° at several of our western stations, but as high as 83° in London, 84° at Loughborough, and 85° at Cambridge. *Wind* fresh South-Easterly in the west of France, and light Easterly in the south of England, but South-Westerly or Westerly elsewhere. *Sea* slight or smooth. *Barometer* falling in Sweden, France, and the south of our Islands, but rising elsewhere. Pressure highest over South Germany, and lowest over the north of Scandinavia, but shallow area of relatively low readings lying over the Bay of Biscay snd our south-west coasts. Another small shallow disturbance appearing later over the north of England.	
		**Friday, August 10.** *Weather* dull over the greater part of our Islands and Norway, with rain in the south of Scotland, but fine elsewhere. *Temperature* risen in Germany and the Netherlands, but fallen elsewhere. Maximum readings below 60° at most of our northern stations, but as high as 84° at Loughborough and 85° in London and at Cambridge. *Wind* North-Easterly over the northern parts of our Islands, but South-Westerly in most other parts of Western Europe; light in force generally. *Sea* moderate to smooth. *Barometer* rising in France, Scandinavia, and the north of our Islands, but falling elsewhere. Anticyclone lying over South Germany, with shallow depressions over the north of Scandinavia, the west of Denmark, and our extreme south-west coasts. Depression in south-west dispersing later, but another shallow disturbance appearing over the east of England.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather during the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Saturday, August 11.** *Weather* fine at most of the Continental stations, but dull in our Islands, with slight rain at Aberdeen, Shields, and Malin Head. Rain falling later at most of our western and northern stations. *Temperature* fallen generally. Maximum readings below 70° in nearly all places and below 60° at our northern stations. *Wind* Easterly in the north of our Islands and North-Westerly on the eastern shores of the North Sea, but Southerly or South-Westerly elsewhere; light or moderate in force generally. Subsequently freshening from South or South-East in Ireland. *Sea* moderate to smooth. *Barometer* falling a little in Ireland and the north of Scandinavia, but rising elsewhere. Pressure highest over South Germany and relatively high over the northern part of the North Sea, with a depression over the north of Scandinavia and another off the west of Ireland. Fall taking place generally later.	
		**Sunday, August 12.** *Weather* dull and rainy in Scotland and the west and north of England, but fair or fine elsewhere. Rain falling later in most parts of the United Kingdom. *Temperature* risen a little in most places. Maximum readings slightly above 70° in many parts of Great Britain, but below 65° at several of our western stations. *Wind* Southerly or South-Easterly in our Islands, but North-Westerly in Sweden and variable in Norway, Denmark, and France; fresh or strong in force on our western coasts, but light or moderate elsewhere. *Sea* rough at some of our western and northern stations. *Barometer* falling generally. Pressure highest over South Germany, with a depression to the westward of our Islands, and another over Finland. Depression in west subsequently advancing north-eastwards over the north of Ireland, and barometer rising again at Valencia.	
		**Monday, August 13.** *Weather* cloudy and showery over the northern parts of our Islands and the eastern shores of the North Sea, but fair or fine elsewhere. *Temperature* fallen at all but the Norwegian and Danish stations. Maximum readings below 65° in all the more western and northern parts of our Islands. *Wind* strong North-Westerly on our western coasts, and South-Westerly in the east, but Easterly in Norway, and calm in the south of France. Wind in west moderating later. *Sea* rather rough on all the more exposed parts of our western and southern coasts. *Barometer* rising on the west coasts of our Islands and France, but falling elsewhere. Pressure high over Spain, France, and South Germany, with a rather deep depression off the north-east of Scotland. Depression subsequently travelling north-eastwards, and barometer rising in all parts of our Islands.	

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	58	39	55·9	45·4	50·3	− 3·5	58	0	6	1·35	+0·70	*	*
	Stornoway	64	43	58·1	48·6	53·1	− 1·6	78	0	5	0·78	−0·01	9	8
	Wick	66	45	57·7	48·1	52·6	− 2·4	74	0	6	1·31	+0·79	*	*
	Lairg ℳ	67	45	60·4	47·9	53·8	− 1·1	83	0	6	0·56	−0·09	*	*
	Glencarron ℳ	64	46	58·3	49·3	53·5	− 1·3	81	0	6	1·54†	?	1	1
	Fort Augustus ℳ	66	48	61·2	52·1	56·4	− 0·6	101	0	6	1·05†	?	*	*
1. SCOTLAND, E.	Nairn	72	49	64·0	51·6	57·4	+ 0·4	108	0	5	0·72	+0·11	*	*
	Aberdeen	68	49	61·4	50·6	55·6	− 1·1	95	0	5	0·24	−0·46	14	13
	Braemar ℳ	65	44	61·3	47·5	54·0	− 0·2	84	0	6	0·26	−0·59	12‡	11‡
	Ochtertyre ℳ	71	44	64·9	49·0	56·5	− 0·7	102	0	3	0·51	−0·28	*	*
	Leith ℳ	70	51	64·6	53·4	58·7	+ 0·6	117	0	6	0·57	−0·03	*	*
	Marchmont ℳ	65	48	61·3	51·1	55·9	− 0·2	97	0	5	0·53	−0·26	11	10
2. ENGLAND, N.E.	Alnwick Castle	65	45	62·6	52·0	57·0	+ 0·3	105	0	4	0·41	−0·27	*	*
	Durham	75	50	67·3	53·3	59·9	+ 2·6	125	0	3	0·19	−0·45	26	25
	Shields	71	51	64·9	53·7	59·0	+ 1·3	119	0	2	0·29	−0·33	*	*
	Scarborough ℳ	73	52	65·4	53·8	59·3	+ 0·3	121	0	6	0·37	−0·23	21‡	20‡
	York	79	50	70·0	54·6	61·8	+ 1·7	139	0	1	0·10	−0·45	29	28
	Spurn Head	75	54	67·4	55·3	61·0	+ 0·3	133	0	2	0·02	?	*	*
3. ENGLAND, E.	Hillington ℳ	84	51	73·0	55·1	63·5	+ 3·3	151	0	1	0·03	−0·56	39	38
	Yarmouth	79	52	69·9	56·7	62·9	+ 2·1	146	0	1	0·02	−0·48	*	*
	Geldeston	82	51	74·7	56·6	65·1	+ 4·1	162	0	0	—	−0·44	41	40
	Cambridge	85	54	76·6	56·1	65·7	+ 3·4	166	0	0	—	−0·51	42	41
	Rothamsted	83	52	74·0	55·4	64·1	+ 2·5	155	0	1	0·02	−0·57	*	*
	Ingatestone	82	52	74·6	56·2	64·9	+ 2·5	160	0	0	—	−0·48	45‡	44‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	82	45	72·4	53·0	62·1	+ 1·6	141	0	3	0·06	−0·51	31‡	30‡
	Loughborough	84	52	74·7	56·3	65·0	+ 3·5	161	0	1	0·01	−0·56	*	*
	Cheadle ℳ	78	50	68·7	54·4	61·1	+ 1·3	134	0	3	0·15	−0·65	*	*
	Churchstoke ℳ	80	48	69·8	53·3	61·1	+ 1·3	134	0	1	0·09	−0·51	49	47
	Hereford ℳ	82	49	74·1	55·8	64·4	+ 3·0	157	0	1	0·03	−0·53	*	*
	Cirencester	79	45	71·7	53·4	62·0	+ 1·2	140	0	2	0·05	−0·69	42	41
	Oxford	80	50	72·6	56·7	64·2	+ 2·8	155	0	0	—	−0·54	45	44
5. ENGLAND, S.	London	85	53	76·3	57·9	66·5	+ 3·7	172	0	0	—	−0·50	51‡	50‡
	Strathfield Turgiss ℳ	80	53	73·6	56·0	64·3	+ 2·9	156	0	2	0·05	−0·46	*	*
	Dungeness	71	52	66·6	56·7	61·4	− 0·3	136	0	0	—	−0·45	*	*
	Hastings (St. Leonard's)	73	54	68·3	57·0	62·3	+ 0·8	142	0	1	0·01	−0·49	43	42
	Southampton	79	55	71·5	56·8	63·7	+ 1·9	152	0	1	0·09	−0·50	47	46
	Hurst Castle	71	55	66·9	58·0	62·2	+ 0·9	141	0	2	0·06	−0·44	*	*
	Stowell ℳ	75	51	68·8	55·6	61·8	+ 1·4	139	0	2	0·02	?	41‡	40‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	65	49	60·7	52·6	56·4	− 0·6	101	0	6	2·52†	+1·42	*	*
	Glasgow	66	49	61·7	52·4	56·8	− 0·5	104	0	6	0·50	−0·35	12	11
	Ardrossan	62	50	60·1	52·9	56·3	− 1·3	100	0	5	0·29	−0·69	*	*
	Glenlee ℳ	67	50	63·1	52·7	57·6	+ 0·2	109	0	7	1·26	?	*	*
	Douglas (Isle of Man)	68	50	62·9	54·3	58·3	+ 0·6	114	0	5	0·32	−0·47	20	19
7. ENGLAND, N.W.	Newton Reigny (Penrith)													
	Barrow-in-Furness	69	52	62·7	55·4	58·8	− 1·2	118	0	4	0·62	−0·16	*	*
	Stonyhurst	74	51	66·0	55·1	60·2	+ 0·9	127	0	3	1·00	−0·04	28	27
	Blackpool ℳ	69	52	64·2	55·7	59·7	− 0·7	124	0	1	0·12	−0·56	25	24
	Manchester	77	52	67·8	54·7	60·9	+ 0·5	132	0	3	0·26	−0·53	*	*
	Liverpool Obsy (Bidston)	75	52	68·1	55·6	61·5	+ 0·9	137	0	4	0·21	−0·42	*	*
	Llandudno ℳ	70	52	65·9	56·0	60·7	+ 0·2	131	0	3	0·31	−0·29	36	35
	Holyhead	68	53	63·9	55·0	59·2	− 0·5	120	0	4	0·17	−0·46	*	*
8. ENGLAND, S.W.	Llandovery	79	36	63·0	53·3	60·2	− 0·1	127	0	4	0·50	−0·50	*	*
	Pembroke	65	53	60·7	55·9	58·1	− 1·4	113	0	3	0·11	−0·54	22	22
	Arlington (N. Devon)	74	44	68·0	53·1	60·1	0·0	127	0	3	0·17	−1·08	*	*
	Cullompton ℳ	77	52	70·4	56·7	63·1	+ 1·6	148	0	2	0·05	−0·56	40	39
	Falmouth	67	52	64·8	55·9	60·1	− 0·9	127	0	2	0·05	−0·75	25	25
	Plymouth	72	57	67·3	58·2	62·5	+ 0·8	144	0	1	0·09	−0·55	24	24
	Prawle Point	68	49	63·6	52·4	57·7	− 2·0	110	0	3	0·08	?	*	*
9. IRELAND, N.	Malin Head	64	51	60·3	52·6	56·2	− 0·9	99	0	4	0·65	?	*	*
	Londonderry	66	51	63·5	52·9	57·9	− 0·7	111	0	5	1·71	+0·91	*	*
	Mullaghmore	66	52	62·6	54·9	58·3	− 0·9	114	0	5	1·60	+0·82	*	*
	Belmullet	67	52	62·7	55·7	59·0	+ 1·3	119	0	3	0·39	?	*	*
	Markree Castle	66	49	63·7	53·0	58·0	− 1·3	112	0	5	1·43	+0·63	19	18
	Brookeborough	66	48	63·3	52·4	57·5	− 1·9	109	0	4	0·74	?	*	*
	Armagh	66	48	65·2	52·5	58·5	− 1·0	116	0	5	0·36	−0·27	19	18
	Donaghadee	66	50	62·6	53·0	57·5	− 0·6	109	0	5	0·21	−0·46	*	*
	Edgeworthstown	68	48	65·1	52·0	58·2	− 1·3	113	0	4	0·49	−0·29	*	*
10. IRELAND, S.	Dublin	71	52	66·8	56·3	61·2	+ 1·5	134	0	2	0·10	−0·53	29	28
	Parsonstown	70	51	66·6	54·9	60·4	+ 1·2	129	0	3	0·21	−0·56	26	25
	Kilkenny	72	52	66·7	54·3	60·1	+ 0·5	127	0	3	0·27	−0·41	*	*
	Waterford	69	52	67·0	54·9	60·6	+ 0·5	130	0	4	0·18	−0·60	*	*
	Roche's Point	64	53	62·9	55·3	58·9	− 1·4	118	0	4	0·38	−0·40	*	*
	Valencia	68	53	64·7	56·0	60·1	+ 0·9	127	0	4	0·56	−0·44	27	26
	Killarney	71	49	66·2	54·5	60·0	+ 0·4	126	0	3	0·27	?	*	*
	Foynes	69	48	66·3	52·3	58·9	+ 0·2	118	0	3	0·14	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	65	54	63·9	55·7	59·6	− 1·2	123	0	5	0·19	−0·35	*	*
	Jersey	79	52	70·9	57·9	64·0	+ 2·0	154	0	1	0·01	−0·49	58	57

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked 𝕊 with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 33.] *Second Series.* WEEK ENDING MONDAY, 20TH AUGUST, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

DISTRICTS. (See p. 132.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
	°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	68	32	56·9	42·3	49·1	5 below.	50	−38	0	0	999	−228	711	+201
1. SCOTLAND, EAST	68	33	59·4	44·2	51·2	5 below.	65	−42	0	0	1228	−388	700	+157
2. ENGLAND, N.E.	68	37	58·7	46·6	52·2	6 below.	71	−45	0	0	1306	−415	555	+ 73
3. ENGLAND, EAST	70	36	62·1	45·3	53·2	8 below.	78	−50	0	0	1678	−327	661	+154
4. MIDLAND COUNTIES	70	37	62·6	44·7	53·1	7 below.	78	−46	0	0	1622	−386	654	+150
5. ENGLAND, SOUTH	72	41	63·6	48·3	55·5	6 below.	95	−41	0	0	1737	−416	577	+204
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	65	37	61·1	45·7	53·0	4 below.	77	−32	0	0	1410	−287	505	+107
7. ENGLAND, N.W.	67	34	60·8	47·0	53·5	6 below.	81	−37	0	0	1484*	−316	500	+117
8. ENGLAND, S.W.	71	34	62·0	47·5	54·3	6 below.	86	−40	0	0	1655	−388	487	+254
9. IRELAND, NORTH	72	37	63·7	47·3	55·0	3 below.	91	−20	0	0	1521	−254	417	+ 67
10. IRELAND, SOUTH	74	35	64·4	47·4	55·4	4 below.	94	−24	0	0	1780	−233	352	+113
— CHANNEL ISLANDS	69	49	63·2	53·7	58·2	3 below.	113	−22	0	0	1873	−306	247	+154

Rainfall. Bright Sunshine.

DISTRICTS. (See p. 132.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
		10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	2	2	5 less.	148	+ 8	23·0	−2·0	56	53	941	+ 46	30	+ 1
1. SCOTLAND, EAST	2	3	4 less.	130	+11	19·1	+0·6	39	38	941	− 95	30	− 3
2. ENGLAND, N.E.	2	2	4 less.	121	+ 7	17·5	+1·3	28	27	800	−159	26	− 5
3. ENGLAND, EAST	3	4	1 less.	123	+ 7	16·3	+1·0	23	23	861	−301	28	−10
4. MIDLAND COUNTIES	2	4	2 less.	114	− 1	15·9	−1·4	30	30	815	−214	27	− 7
5. ENGLAND, SOUTH	2	3	2 less.	115	+ 6	17·5	+1·5	34	34	839	−266	28	− 8
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	2	5	4 less.	123	− 6	23·5	+0·4	45	44	982	− 16	32	0
7. ENGLAND, N.W.	2	4	4 less.	123	+ 3	17·9	−3·0	40	39	881*	−122	29	− 3
8. ENGLAND, S.W.	3	10	1 more.	127	+ 2	21·2	−3·7	43	43	1025	−151	34	− 5
9. IRELAND, NORTH	2	6	2 less.	128	−16	23·4	+2·1	38	37	868	− 63	28	− 2
10. IRELAND, SOUTH	2	11	3 more.	117	−18	23·9	+0·2	41	41	1003	− 48	33	− 1
— CHANNEL ISLANDS	4	10	5 more.	142	+ 8	19·5	+1·2	35	35	1154	−254	38	− 9

General Remarks.

Weather has been fairer than of late in Ireland and Scotland, but in most parts of England the sky has been more cloudy than it was last week. Very little rain fell during the greater part of the period, but on the 19th and 20th a considerable amount fell over the more southern and western districts.

Temperature has again been very low for the time of year, especially over England, where the deficit ranged from 6° to 8°. The highest of the maxima, which were recorded on rather irregular dates, varied from 65° in "Scotland, W." to 74° in "Ireland, S." On some occasions the daily maxima were extremely low; at Oxford on the 16th the thermometer did not rise above 55°. The absolute minima, which were generally recorded either on the 18th or 19th, were as low as from 32° to 37° in Scotland and between 35° and 37° in Ireland, while over England they ranged from 34° in "England, N.W." and "England, S.W." to 41° in "England, S." In the "Channel Islands" the lowest reading was 49°. Frost occurred on the grass at most of the inland stations; at Hillington on the 19th the thermometer exposed on the grass fell to 26°·6.

Rainfall has been more than the mean in "England, S.W.", "Ireland, S.", and the "Channel Islands", but in all other districts a deficit is shown.

Bright sunshine has been more prevalent than it was last week over Ireland, Scotland, and the west of England, but less so over central, southern, and eastern England. The percentage of the possible amount of duration ranged from 23 in "England, E." to 43 in "England, S.W.", 44 in "Scotland, W.", and 53 in "Scotland, N."

Depressions observed.—At the commencement of the period the depression which had moved north-eastwards over our northern districts was travelling away over Scandinavia. As it disappeared the conditions became anticyclonic over the greater part of the United Kingdom, but some depressions which appeared over France affected the winds and weather over our more southern districts. Towards the end of the period the barometer fell steadily in all parts of our Islands, and depressions appeared off our western coasts and over the Bay of Biscay.

* These values have been altered owing to the receipt of further information.

A 55445. 350.—8/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

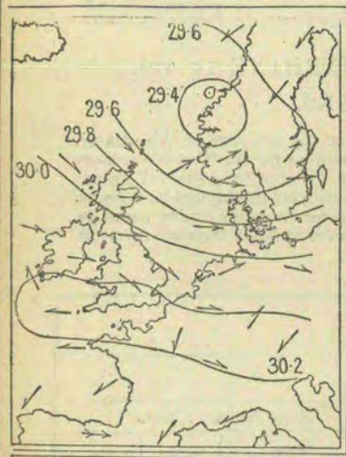
Weather

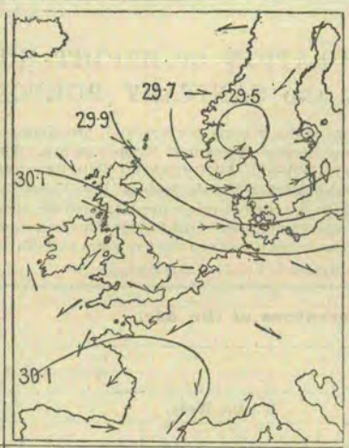
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, August 14.

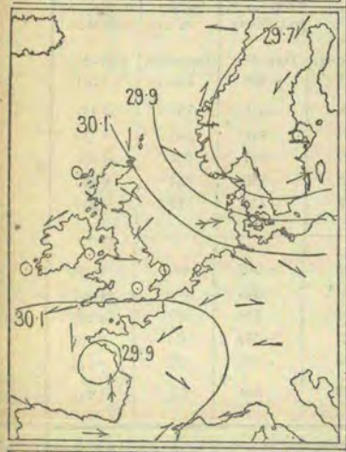
Weather fine generally, but rainy at some of our extreme northern stations, and thundery in the west of France.

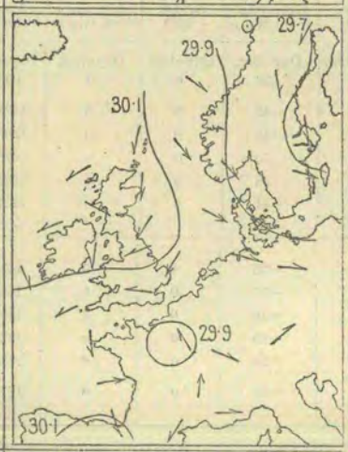
Temperature fallen generally. Maximum readings below 70° in most places, and below 60° in the north of Scotland.

Wind North-Easterly in the northern parts of Scandinavia and France, but Westerly in most other localities; strong in force over the North Sea. Subsequently increasing to a gale from the Westward at the Danish stations.

Sea rather rough in the extreme north, but moderate to smooth elsewhere.

Barometer rising at all but the Scandinavian stations. Long anticyclonic band extending from South Germany to our south-west coasts, with a rather deep depression over Norway and a shallow disturbance over the south-west of France. Scandinavian depression subsequently moving eastwards, but French disturbance remaining stationery, and becoming somewhat deeper.





Wednesday, August 15.

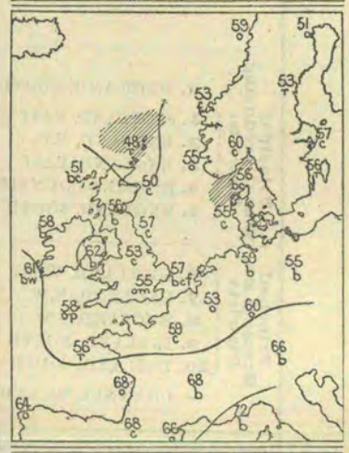
Weather rainy at some of the Channel stations as well as in Sweden, and thundery in the west of France, but fine in most other localities. Thunderstorm occurring at Jersey in afternoon.

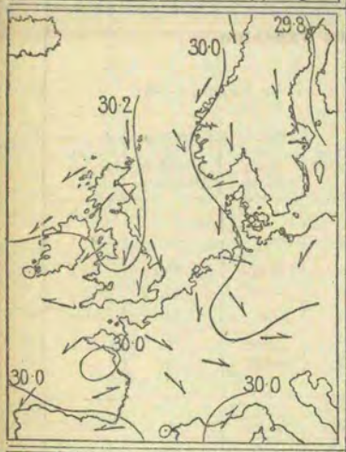
Temperature risen slightly in the north, but fallen elsewhere. Maximum readings below 70° generally, and below 60° at our extreme northern and southern stations.

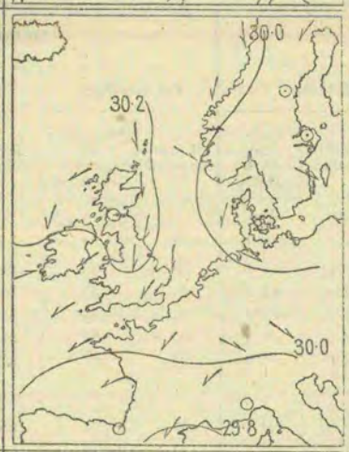
Wind moderate North-Easterly in the north of Sweden, but strong from West on the eastern shores of the North Sea. Fresh or strong from the North-Eastward over the Channel, and strong from South-West over the south-west of France.

Sea rather rough in the extreme north, but moderate to smooth elsewhere.

Barometer falling in Sweden, France, and the south of our Islands, but rising elsewhere. Norwegian depression of previous day now travelling away over the Baltic, but French disturbance moving northwards to the mouth of the Loire. Latter system subsequently travelling eastwards across France.







Thursday, August 16.

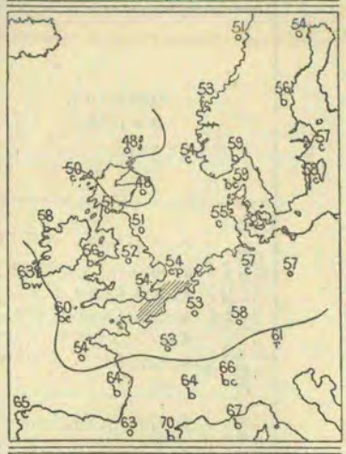
Weather fair generally, but dull in Germany, the east of our Islands, and the north of France. Slight rain falling later at some of our western and southern stations.

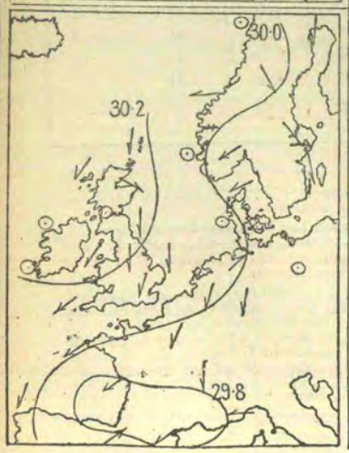
Temperature fallen a little in most places. Maximum readings below 60° at all but our western stations, and below 55° on some parts of our north and north-east coasts.

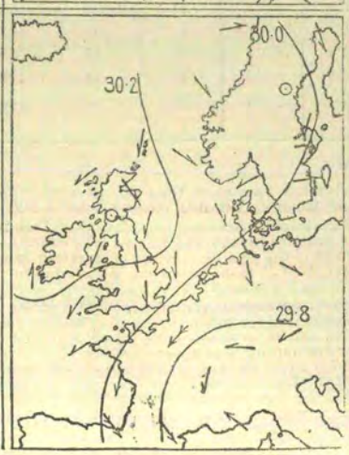
Wind North-Easterly or Easterly in the west and south of our Islands, and variable in the south of France, but chiefly Northerly elsewhere; light or moderate in force generally, but strong at some of the Channel stations.

Sea rather rough at the entrance to the Channel, but slight elsewhere.

Barometer rising at all but the German and southern French stations. Large anticyclone lying over the north of our Islands, with shallow depressions over the western parts of France and Germany, the Gulf of Genoa, and the north of Spain.







Friday, August 17.

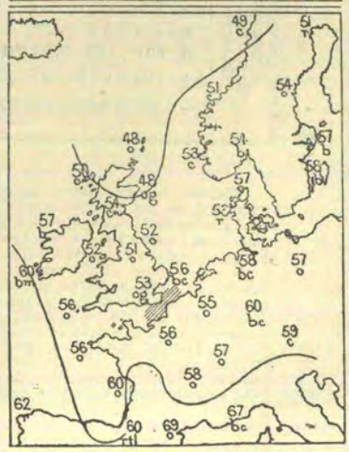
Weather fine at many of our western and southern stations, but cloudy and overcast elsewhere, with a thunderstorm at Biarritz. Heavy rain falling later at some of the French and German stations, and slight showers in the east of England.

Temperature fallen in most places. Maximum readings below 60° in many parts of the United Kingdom.

Wind moderate Northerly in Sweden and the north and east of Great Britain, but chiefly North-Easterly elsewhere; fresh and strong in force over the Channel and Bay of Biscay.

Sea moderate to smooth generally.

Barometer rising in Scandinavia and the west and north of our Islands, but falling elsewhere. Anticyclone lying off the north-west of Scotland, with a shallow area of low pressure over the Baltic and an elongated depression over the south of France. Depression over France subsequently moving eastwards, and barometer rising quickly over the Bay of Biscay.



SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

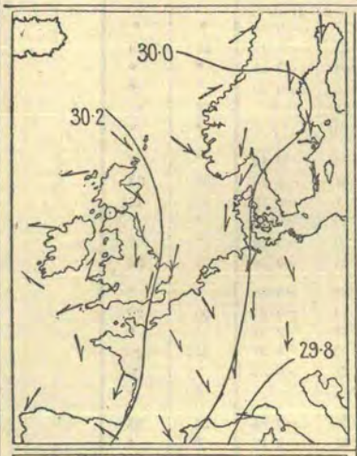
Weather

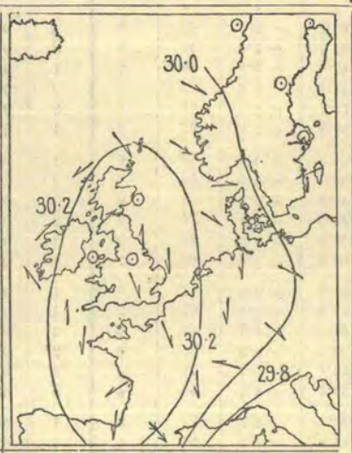
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Saturday, August 18.

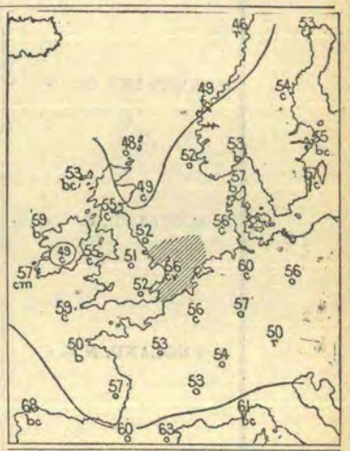
Weather fine in the west and south of our Islands, but cloudy elsewhere, with rain at Bodö and Munich. Subsequently becoming dull in the west of Ireland.

Temperature risen slightly in our Islands, but fallen at many of the Continental stations. Maximum readings below 60° at most of our northern stations, but a little above 65° in the extreme south.

Wind light from South or South-East in the west of our Islands, but moderate from the Northward or North-Westward elsewhere.

Sea rather rough off the east and south-east of England.

Barometer rising at all but our extreme northern stations. Large area of high pressure lying over our Islands, the Bay of Biscay, and the west of France, with a depression over the Gulf of Genoa. Slight fall taking place on our west coasts later.



Sunday, August 19.

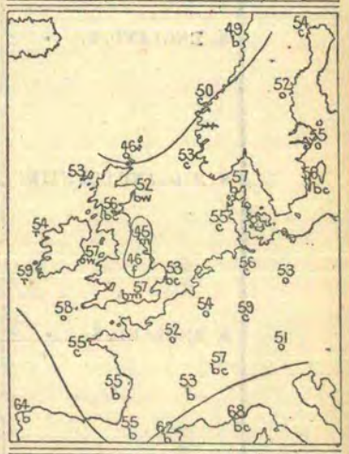
Weather rainy in Ireland, but fair or fine elsewhere. Rain extending later to most of our western and northern stations. Heavy amounts recorded in Ireland.

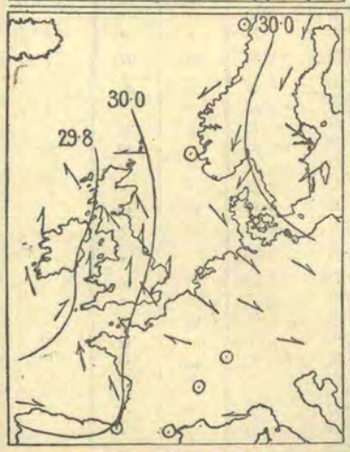
Temperature risen a little in most places. Maximum readings exceeding 65° at several of our central and southern stations, and reaching 70° at Loughborough and Cambridge.

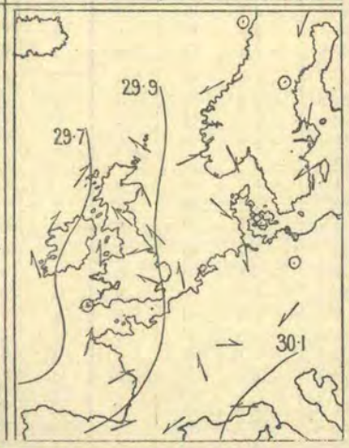
Wind South-Easterly or Southerly over the greater part of our Islands and France; strong in force on our south-west coasts. North-Westerly over Germany and the eastern shores of the North Sea. Subsequently increasing to a gale from the Southward in Ireland.

Sea rough off the west of Ireland, but moderate to smooth elsewhere.

Barometer fallen at all but the German and eastern French stations. Anticyclone lying over France and the east of England, with a large shallow depression over the south of Sweden, and a deeper disturbance off the west of Ireland. Disturbance in west subsequently moving slowly northwards.







Monday, August 20.

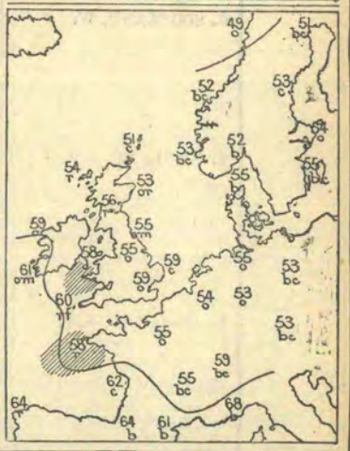
Weather dull and unsettled in our Islands and the west of France, with rain in many places, but fair or fine elsewhere. Amounts of rain heavy at some of our western and southern stations.

Temperature risen over the United Kingdom and France, but fallen elsewhere. Maximum readings above 65° in some isolated places, highest of all being 70° at Mullaghmore and Parsonstown.

Wind moderate or fresh from the South-Eastward in our Islands and France, but North-Easterly in Scandinavia, and North-Westerly in Denmark and Germany. Subsequently veering to the South-Westward at some of our western stations.

Sea rather rough at the mouths of the English and Bristol Channels, but moderate to smooth elsewhere.

Barometer falling at all but the Scandinavian and Danish stations. Pressure highest over the Netherlands and Germany, with a large area of low readings over the Baltic, and another off our western coasts. Fall continuing all day.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending Aug. 13	Newton Reigny	69	48	64·1	52·0	57·7	− 0·3	110	0	4	0·45	−0·26	28	26

III.—DATA from which the SUMMARY on page 129 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	55	43	52·6	44·4	48·2	− 5·7	43	0	4	0·17	−0·55	*	*
	Stornoway	62	36	56·1	40·3	47·7	− 7·0	47	5	3	0·32	−0·49	53	50
	Wick	59	35	55·1	43·6	49·0	− 5·9	49	0	1	0·04	−0·47	*	*
	Lairg ℌ	63	32	58·4	39·6	48·4	− 5·2	55	7	2	0·15	−0·50	*	*
	Glencarron ℌ	68	37	60·6	42·0	50·7	− 2·8	61	0	3	0·35†	?	59	56
	Fort Augustus ℌ	63	37	58·4	44·0	50·8	− 5·6	62	0	1	0·10†	?	*	*
1. SCOTLAND, E.	Nairn	66	38	59·4	45·1	51·8	− 4·7	69	0	1	0·08	−0·44	*	*
	Aberdeen	60	35	56·0	44·3	49·7	− 6·5	54	0	2	0·38	−0·33	33	32
	Braemar ℌ	64	33	57·9	40·0	48·4	− 5·5	53	6	3	0·17	−0·72	48‡	46‡
	Ochtertyre ℌ	68	38	64·6	45·1	54·3	− 2·1	86	0	2	0·40	−0·40	*	*
	Leith	66	40	59·6	46·9	52·9	− 4·8	76	0	2	0·30	−0·19	*	*
	Marchmont ℌ	67	38	58·7	44·0	50·9	− 4·6	62	0	1	0·41	−0·38	37	36
2. ENGLAND, N.E.	Alnwick Castle	62	42	55·6	48·0	51·6	− 4·9	67	0	1	0·30	−0·38	*	*
	Durham	68	37	59·7	44·4	51·6	− 5·2	67	0	1	0·13	−0·51	30	29
	Shields	64	43	58·1	45·7	51·5	− 5·7	67	0	2	0·24	−0·38	*	*
	Scarborough ℌ	65	43	57·8	47·2	52·2	− 6·5	71	0	2	0·22	−0·37	25‡	25‡
	York	68	41	61·9	44·3	52·6	− 6·7	74	0	3	0·21	−0·34	?	?
	Spurn Head	63	47	58·9	49·1	53·7	− 5·7	82	0	2	0·18	?	*	*
3. ENGLAND, E.	Hillington ℌ	68	36	62·4	43·6	52·4	− 7·5	73	0	1	0·55	−0·04	25	25
	Yarmouth	64	44	60·1	48·6	54·0	− 6·7	84	0	4	0·31	−0·18	*	*
	Geldeston	66	39	61·7	44·6	52·6	− 8·3	74	0	5	0·38	−0·03	24	24
	Cambridge	70	40	64·6	44·3	53·8	− 7·8	83	0	3	0·54	+0·03	20	20
	Rothamsted	66	39	61·8	45·6	53·2	− 8·0	78	0	1	0·27	−0·32	*	*
	Ingatestone												‡	‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	70	38	62·3	45·4	53·3	− 6·7	79	0	2	0·26	−0·29	27‡	27‡
	Loughborough	70	38	65·7	45·3	54·9	− 6·0	90	0	1	0·48	−0·11	*	*
	Cheadle ℌ	64	41	60·8	43·7	51·7	− 7·8	68	0	2	0·38	−0·45	*	*
	Churchstoke ℌ	65	37	61·5	42·7	51·5	− 8·0	67	0	2	0·43	−0·18	37	36
	Hereford ℌ	70	40	64·2	44·0	53·5	− 7·4	81	0	2	0·33	−0·26	*	*
	Cirencester	66	40	61·3	46·0	53·2	− 7·3	78	0	1	0·50	−0·25	31	31
	Oxford	68	40	62·7	45·7	53·7	− 7·7	82	0	1	0·49	−0·04	26	26
5. ENGLAND, S.	London	70	45	64·7	48·6	56·2	− 6·1	99	0	1	0·22	−0·28	25‡	25‡
	Strathfield Turgiss ℌ	70	41	64·6	43·7	53·5	− 7·7	81	0	1	0·23	−0·27	*	*
	Dungeness	66	44	63·0	50·3	56·3	− 5·3	100	0	4	0·32	−0·16	*	*
	Hastings (St. Leonard's)	64	48	61·8	50·0	55·6	− 5·9	95	0	5	0·27	−0·27	35	35
	Southampton	72	46	65·4	48·5	56·4	− 5·3	101	0	2	0·44	−0·16	37	37
	Hurst Castle	68	49	63·9	51·0	57·1	− 4·1	106	0	2	0·43	−0·09	*	*
	Stowell ℌ	67	42	62·1	45·9	53·5	− 6·9	81	0	2	0·39	?	39‡	39‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	64	41	61·5	44·8	52·9	− 4·0	76	0	2	0·33†	−0·77	*	*
	Glasgow	65	44	61·9	47·1	54·1	− 2·5	85	0	2	0·52	−0·33	42	41
	Ardrossan	65	45	61·0	48·7	54·5	− 2·7	88	0	1	0·05	−0·86	*	*
	Glenlee ℌ	65	37	61·7	41·7	51·1	− 5·4	65	1	2	0·63	?	*	*
	Douglas (Isle of Man)	64	41	59·6	46·3	52·6	− 5·1	74	0	2	0·91	+0·09	48	47
7. ENGLAND, N.W.	Newton Reigny (Penrith)	67	34	59·8	42·6	50·7	− 6·9	61	0	3	0·23	−0·48	34	33
	Barrow-in-Furness	63	45	60·0	48·6	54·0	− 6·0	84	0	2	0·67	−0·14	*	*
	Stonyhurst	65	42	59·7	45·7	52·3	− 7·0	72	0	2	0·32	−0·72	33	32
	Blackpool ℌ	66	42	60·8	46·9	53·4	− 6·8	80	0	2	0·35	−0·33	41	40
	Manchester	67	43	61·2	46·0	53·1	− 6·8	78	0	2	0·31	−0·47	*	*
	Liverpool Obsr (Bidston)	67	46	62·0	48·4	54·8	− 5·5	90	0	2	0·40	−0·23	*	*
	Llandudno ℌ	68	45	62·0	48·3	54·7	− 5·6	89	0	2	0·45	−0·15	50	49
	Holyhead	64	45	60·9	49·3	54·8	− 4·9	90	0	2	0·31	−0·34	*	*
8. ENGLAND, S.W.	Llandovery	71	34	64·6	43·4	53·4	− 6·4	80	0	2	0·74	−0·32	*	*
	Pembroke	64	47	60·1	51·0	55·3	− 3·5	93	0	2	0·74	+0·09	43	43
	Arlington (N. Devon)	68	40	61·3	45·4	52·9	− 6·6	76	0	2	1·09	−0·17	*	*
	Cullompton ℌ	70	38	63·6	44·5	53·5	− 7·6	81	0	3	0·62	−0·01	38	38
	Falmouth	63	49	61·1	51·2	55·9	− 4·8	97	0	3	1·60	+0·76	42	42
	Plymouth	68	47	63·4	50·6	56·6	− 5·1	102	0	3	1·32	+0·67	49	49
	Prawle Point	63	44	59·7	46·7	52·8	− 6·6	76	0	4	0·56	?	*	*
9. IRELAND, N.	Malin Head	61	49	59·7	50·9	55·0	− 2·0	91	0	2	0·57	?	*	*
	Londonderry	72	43	68·1	46·7	56·8	− 1·3	104	0	2	0·20	−0·61	*	*
	Mullaghmore	70	47	64·3	50·4	56·9	− 2·0	104	0	2	0·14	−0·64	*	*
	Belmullet	66	49	64·0	51·1	57·2	− 0·5	106	0	3	0·73	?	*	*
	Markree Castle	67	37	64·3	44·6	53·9	− 4·6	83	0	2	0·35	−0·46	44	43
	Brookeborough	68	39	64·9	43·4	53·5	− 5·4	81	0	2	0·41	?	*	*
	Armagh	65	37	62·9	45·0	53·4	− 5·5	80	0	2	0·23	−0·38	32	31
	Donaghadee	64	45	60·3	48·6	54·1	− 3·6	85	0	3	1·06	+0·38	*	*
	Edgeworthstown	69	37	65·0	44·9	54·4	− 4·5	87	0	2	1·28	+0·50	*	*
10. IRELAND, S.	Dublin	66	42	62·4	48·2	54·9	− 4·6	90	0	1	0·23	−0·41	49	49
	Parsonstown	70	37	64·6	46·1	54·8	− 4·2	90	0	2	1·40	+0·60	28	28
	Kilkenny	67	35	63·9	43·9	53·3	− 5·7	79	0	2	1·13	+0·38	*	*
	Waterford	67	36	64·1	44·0	53·5	− 6·1	81	0	2	1·28	+0·45	*	*
	Roche's Point	65	45	62·7	49·0	55·4	− 4·5	94	0	2	1·55	+0·74	*	*
	Valencia	69	45	65·0	50·7	57·4	− 1·6	108	0	4	1·75	+0·71	45	45
	Killarney	74	40	66·4	47·4	56·2	− 3·4	99	0	3	1·08	?	*	*
	Foynes	69	43	65·9	49·9	57·4	− 1·3	108	0	3	0·70	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	66	52	62·7	54·0	58·1	− 2·6	113	0	3	0·71	+0·16	*	*
	Jersey	69	49	63·6	53·4	58·2	− 3·6	113	0	4	1·34	+0·83	35	35

Stations marked ℌ are in connection with the Royal Meteorological Society, and those marked ℌ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 34.] *Second Series.* WEEK ENDING MONDAY, 27TH AUGUST, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 136.)	Observed during the Week. Highest.	Observed during the Week. Lowest.	Averages of Daily Maxima.	Averages of Daily Minima.	Averages of Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	For the Week. Difference from Mean.	For the Week. Below 42°	For the Week. Difference from Mean.	From January 3, 1888. Above 42°.	From January 3, 1888. Difference from Mean.	From January 3, 1888. Below 42°.	From January 3, 1888. Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	74	45	61·7	50·8	56·0	2 above.	93	+12	0	0	1097	−213	711	+201
	1. SCOTLAND, EAST	73	46	64·2	51·4	57·4	2 above.	108	+3	0	0	1336	−383	700	+157
	2. ENGLAND, N.E.	71	45	65·1	52·6	58·5	1 above.	116	+1	0	0	1422	−406	555	+ 73
	3. ENGLAND, EAST	75	48	67·8	52·7	59·8	1 below.	125	−2	0	0	1803	−323	661	+154
	4. MIDLAND COUNTIES	73	47	66·5	52·1	58·8	1 below.	118	−5	0	0	1740	−383	654	+150
	5. ENGLAND, SOUTH	75	47	66·8	54·4	60·2	1 below.	127	−8	0	0	1854	−421	577	+204
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	70	45	63·1	53·8	58·1	2 above.	113	+5	0	0	1523	−277	505	+107
	7. ENGLAND, N.W.	69	45	63·9	53·8	58·6	1 below.	116	0	0	0	1300	−312	500	+117
	8. ENGLAND, S.W.	71	50	64·7	54·5	59·2	0 (average).	120	−4	0	0	1775	−392	487	+254
	9. IRELAND NORTH	70	47	64·3	52·9	58·2	1 above.	113	+4	0	0	1634	−247	417	+ 67
	10. IRELAND, SOUTH	71	45	65·3	54·0	59·3	1 above.	121	+5	0	0	1901	−226	352	+113
	— CHANNEL ISLANDS	70	53	65·5	57·2	61·0	0 (average).	133	0	0	0	2006	−308	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 136.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	5	15	3 more.	153	+10	24·5	−1·7	22	22	953	+ 49	30	+ 1
	1. SCOTLAND, EAST	6	7	1 less.	133	+14	19·8	+0·6	24	24	965	−108	30	− 3
	2. ENGLAND, N.E.	5	5	1 less.	126	+ 8	18·0	+1·2	25	25	825	−103	23	− 5
	3. ENGLAND, EAST	5	5	0 (average).	123	+ 8	16·8	+1·0	31	32	892	−307	23	−10
	4. MIDLAND COUNTIES	4	6	1 less.	118	0	16·5	−1·5	30	31	845	−223	27	− 7
	5. ENGLAND, SOUTH	4	2	3 less.	119	+ 6	17·7	+1·1	33	34	872	−274	28	− 9
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	6	12	3 less.	129	− 4	27·7	+0·2	23	23	1003	− 25	32	− 1
	7. ENGLAND, N.W.	6	10	2 more.	129	+ 6	18·9	−2·8	23	23	907	−132	29	− 4
	8. ENGLAND, S.W.	7	9	0 (average).	134	+ 5	22·1	−3·7	40	41	1035	−161	34	− 5
	9. IRELAND, NORTH	7	11	4 more.	135	−13	24·5	+2·4	34	34	903	− 59	28	− 2
	10. IRELAND, SOUTH	6	10	2 more.	123	−15	24·9	+0·4	46	47	1040	− 42	33	− 2
	— CHANNEL ISLANDS	5	3	3 less.	147	+ 9	19·8	+0·9	45	47	1199	−267	38	− 9

General Remarks.

Weather has been unsettled and rainy over the western, north-western, and extreme northern parts of the Kingdom, but elsewhere the conditions have been fairer and the rainfall less heavy and frequent. Some thunder and lightning were experienced in many parts of Great Britain as well as at a few of the Irish stations.

Temperature has been a little above the mean in Ireland, Scotland, and the north-east of England, and about equal to it in "England, S.W." and the "Channel Islands", but in the other English districts a slight deficit is shown. The highest of the maxima, which were recorded either on the 24th or 25th, varied from 69° in "England, N.W." to 74° in "Scotland, N." and 75° in "England, E." and "England, S." The lowest of the minima, which were registered on the 23rd in Scotland, and on irregular dates over England and Ireland, varied from 45° over the north of England, in "Ireland, S.", and at some of the Scotch stations, to 50° in "England, S.W." and to 56° in the "Channel Islands".

Rainfall has been rather more than the mean over Ireland and in the north of Scotland, but less in most other districts, especially over the south of England and in the "Channel Islands".

Bright sunshine shows a decrease over Scotland, but in most parts of England and in the south of Ireland it has been more prevalent than it was last week. The percentage of the possible amount of duration ranged from 22 to 26 in Scotland, from 34 to 47 in Ireland, and from 26 to 41 over England. In the "Channel Islands" the percentage was 47.

Depressions observed.—During this period the barometer has been generally highest to the southward or south-eastward of our Islands, while a series of depressions has moved in a north-easterly direction over our western and northern coasts, and a few subsidiary disturbances have passed across our more central districts. The depressions which appeared off our western coasts on the 23rd and 24th were rather deep and occasioned strong Southerly gales in many parts of Ireland, and moderate to fresh gales over the western and northern parts of Great Britain.

A 55498. 350.—8/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

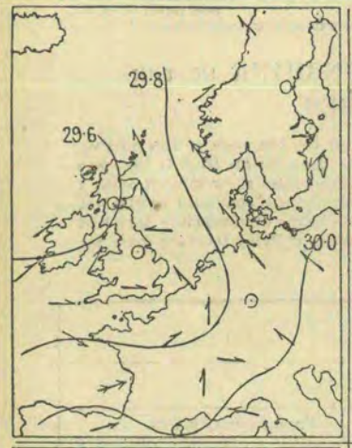
Weather

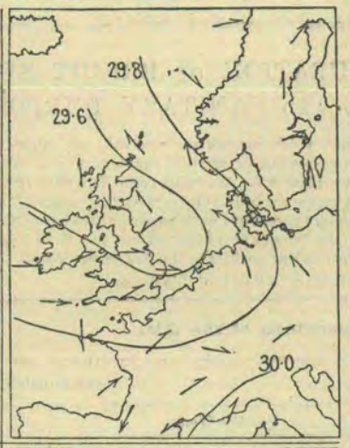
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, August 21.

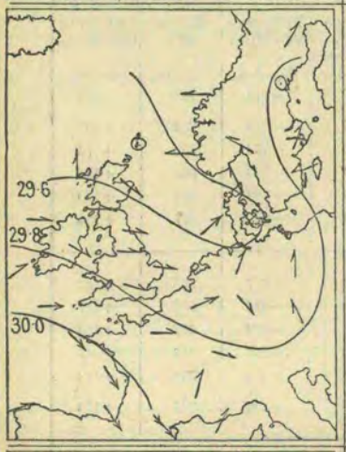
Weather fine in Sweden, Denmark, and the south of Ireland, but cloudy or overcast elsewhere, with rain in many parts of our Islands. Some improvement taking place over the United Kingdom later, but thunder showers falling locally.

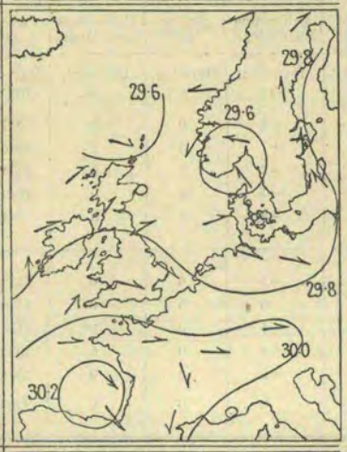
Temperature fallen a little in most places. Maximum readings below 70° in all parts of our Islands, but exceeding 75° over France.

Wind South-Westerly or Westerly on our southern and the French coasts, but South-Easterly over the North Sea and the north and east of Great Britain; strong to a gale in force over the Bay of Biscay, but light or moderate elsewhere.

Sea rather rough at Wick and Lorient, but moderate to smooth elsewhere.

Barometer falling generally. Pressure highest over the south of Spain, and lowest to the westward of our Islands, but subsidiary "hollow" lying over England. Low pressure systems subsequently moving northwards, and barometer rising on our southern coasts.





Wednesday, August 22.

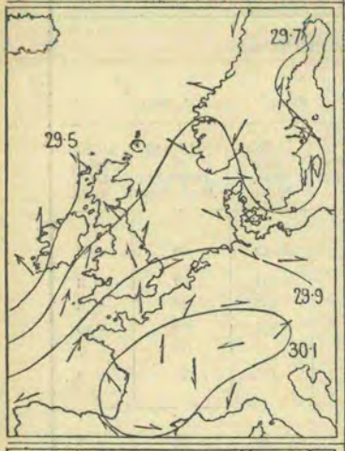
Weather fair generally, but rainy in the south of Norway and the south-east of France. Showers falling later in many parts of the United Kingdom.

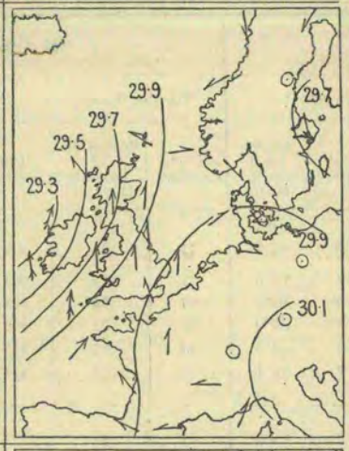
Temperature risen in most places. Maximum readings somewhat higher than on previous day, but thermometer remaining below 70° at most of the British and Irish stations.

Wind moderate from the Westward in our Islands and strong from North-West in the west of France, but light from the Eastward in Norway and the south of Sweden. Subsequently backing to South-West or South on our western coasts.

Sea rather rough at the mouth of the Channel, but moderate to smooth elsewhere.

Barometer rising in our Islands and the west of France, but falling elsewhere. Low pressure systems of previous day now lying over the North Sea and our northern coasts, and large anticyclone advancing from Spain over the Bay of Biscay. New fall of barometer setting in later on our south-west coasts.





Thursday, August 23.

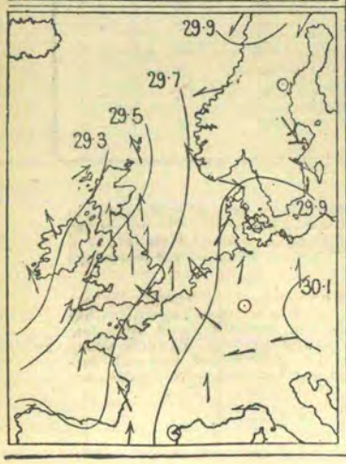
Weather fine over the east of England and the greater part of France, but cloudy elsewhere, with rain at our south-western and southern stations. Rain extending later to nearly all parts of our Islands.

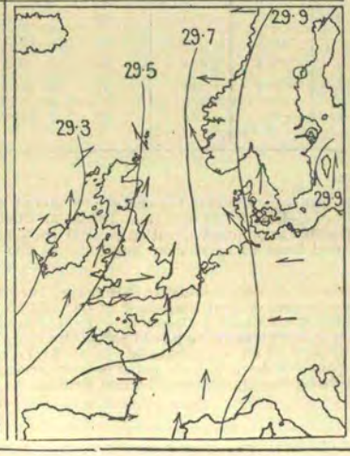
Temperature fallen in Germany and France, but changed little and irregularly elsewhere. Maximum readings again below 70° in nearly all parts of the United Kingdom.

Wind Southerly or South-Easterly over the greater part of our Islands and France as well as in Sweden, but Westerly on the eastern shores of the North Sea. Increasing to fresh or strong gale on all our western and south-western coasts, and to moderate gale in Scotland.

Sea rough on our south-west coasts, but moderate to smooth elsewhere.

Barometer rising at all our more eastern stations, but falling quickly in the west. Large anticyclone lying over France and South Germany, with a deep depression off the west of Ireland. Fall taking place later in all parts of the United Kingdom and France, and depression in west becoming deeper.





Friday, August 24.

Weather fine generally, but rainy over the north of England and the mouth of the Channel as well as at some of the Scandinavian stations. Rain falling later in most parts of the United Kingdom, with thunderstorms over England and lightning in the south of Ireland.

Temperature fallen a little in Sweden, Germany, and Ireland, but risen elsewhere. Maximum readings exceeding 70° over the inland parts of England; highest of all being 75° in London and at Cambridge.

Wind Southerly or South-Easterly. Fresh or strong in force in many parts of our Island and France, but moderating later.

Sea rough in the extreme south-west, west, and north.

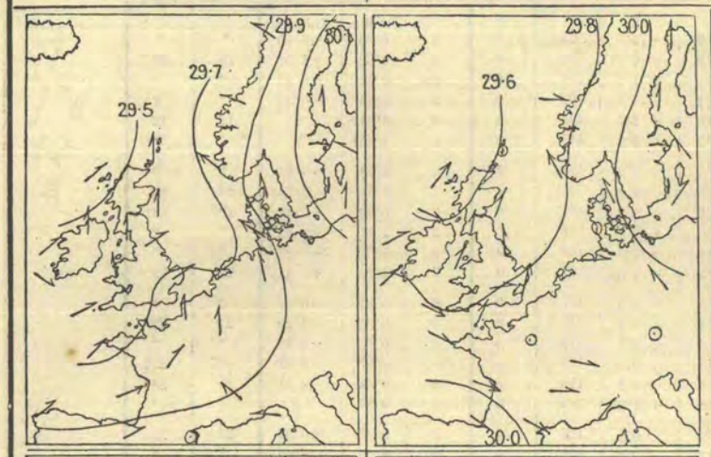
Barometer falling at all but the Scandinavian stations. Anticyclone lying over Germany, with large area of low pressure to the westward of our Islands. Shallow secondary disturbances appearing later over England and France, but barometer inclined to rise generally.

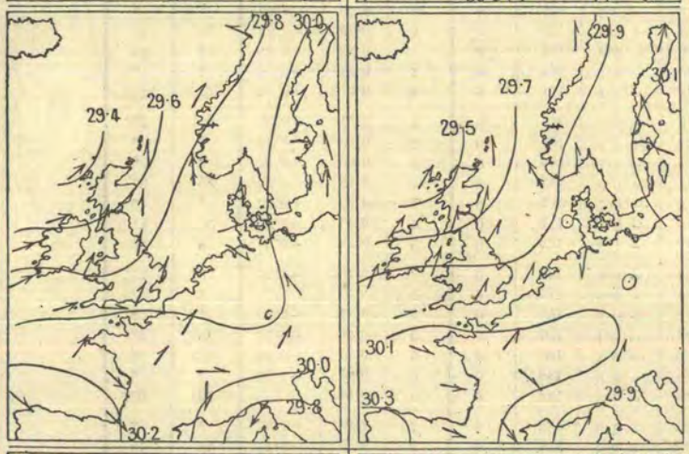
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

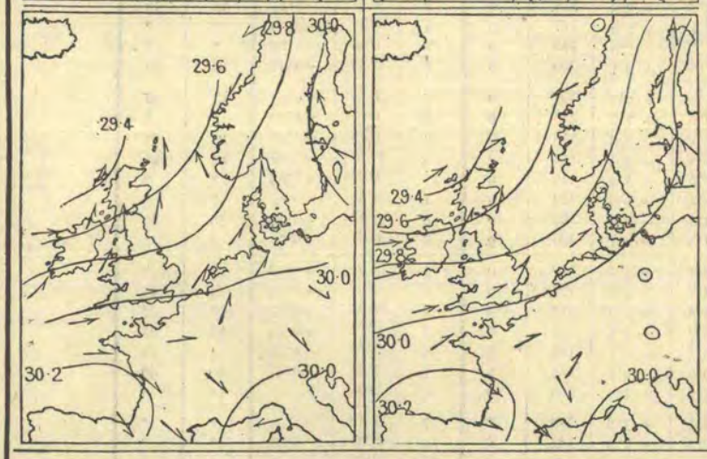
Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**







Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, August 25.

Weather fair generally, but showery at some of our western stations. Showers falling later in most parts of the Kingdom, with thunderstorms at Liverpool and lightning at Wick.

Temperature fallen a little over Ireland, England, and France, but risen elsewhere. Maximum readings exceeding 70° over the inland parts of Great Britain.

Wind light from South or South-West over the greater part of our Islands, but North-Westerly in the south of Ireland. Fresh or strong from South-East on the eastern shores of the North Sea; variable in Germany and the east of France.

Sea rough at the mouths of the English and Bristol Channels, but moderate to smooth elsewhere.

Barometer rising at all but the Norwegian and Danish stations. Pressure high both over Spain and the Gulf of Bothnia, with a depression off the north-west of Scotland and shallow disturbances over the North Sea and our south-west coasts. Rise of barometer continuing all day.

Sunday, August 26.

Weather changeable and showery in most districts.

Temperature fallen a little generally. Maximum readings below 70° in most parts of the United Kingdom.

Wind moderate or fresh from the South-Westward over Ireland and England, but strong from South at our extreme northern and some of the Scandinavian stations. Fresh or strong from the North-westward in the west of France, and strong gale from North-East reported at Nice.

Sea rough on our south-western and extreme northern coasts, as well as off the south of France.

Barometer falling in Scotland and Scandinavia, but rising elsewhere. Pressure highest in Portugal, but high in Sweden, with a rather deep depression off the Hebrides, and a shallower disturbance over the Gulf of Genoa. Former disturbance subsequently travelling away in a north-easterly direction, and barometer rising again in north.

Monday, August 27.

Weather fair over the greater part of our Islands, with local showers, but dull at most of the Continental stations. Sky clearing in France later.

Temperature fallen a little in our Islands, but changed irregularly elsewhere. Maximum readings again below 70° in most parts of the United Kingdom.

Wind South-Westerly over our Islands and the North Sea, but Southerly in Scandinavia, and North-Westerly in France; moderate to strong in force generally.

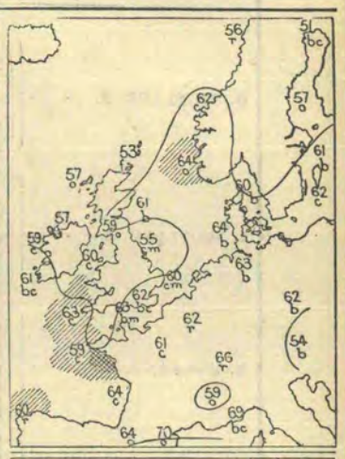
Sea rough on several parts of our western and northern coasts.

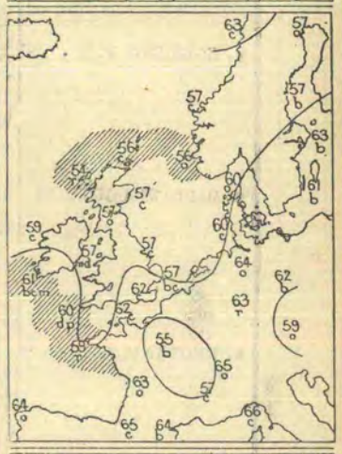
Barometer rising in France, Germany, and the south of our Islands, but falling elsewhere. Pressure highest over Spain and the southern parts of the Bay of Biscay, but high over the Gulf of Bothnia, with a depression off the north west of Scotland. Slight fall taking place generally later.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending Aug. 20	York	—	—	—	—	—	—	—	—	—	—	—	29	28

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	59	47	56·7	49·3	52·8	− 0·9	76	0	5	0·80	+0·05	*	*
	Stornoway	62	45	60·0	50·3	54·9	+ 0·7	90	0	7	2·32	+1·50	29	29
	Wick	66	45	61·7	50·6	55·8	+ 1·2	97	0	3	0·32	−0·22	*	*
	Lairg S	74	47	64·6	50·6	57·2	+ 3·2	106	0	5	0·44	−0·22	*	*
	Glencarron S	66	48	62·4	51·4	56·6	+ 2·7	102	0	6	3·34†	?	15	15
	Fort Augustus S	69	51	65·7	52·5	58·7	+ 2·2	117	0	6	1·55†	?	*	*
1. SCOTLAND, E.	Nairn	73	50	67·3	53·4	59·9	+ 4·2	125	0	6	0·18	−0·45	*	*
	Aberdeen	69	47	62·9	51·0	56·6	+ 0·9	102	0	5	0·58	−0·15	26	26
	Braemar S	67	46	61·2	49·5	55·0	+ 2·3	91	0	6	0·49	−0·42	23‡	23‡
	Ochtertyre S	72	46	65·9	50·9	58·0	+ 2·6	112	0	5	1·14	+0·32	*	*
	Leith	70	48	65·7	52·7	58·8	+ 1·7	118	0	5	0·32	−0·26	*	*
	Marchmont S	66	48	62·4	50·6	56·2	+ 1·3	99	0	7	1·24	+0·44	22	22
2. ENGLAND, N.E.	Alnwick Castle	65	50	62·6	52·6	57·3	+ 1·5	107	0	6	0·51	−0·18	*	*
	Durham	71	48	67·1	51·5	58·8	+ 2·4	118	0	6	0·34	−0·29	27	27
	Shields	68	52	64·6	53·0	58·5	+ 1·8	116	0	3	0·16	−0·45	*	*
	Scarborough M	68	45	63·8	52·2	57·7	0·0	110	0	6	0·67	+0·07	21‡	21‡
	York	71	48	66·4	52·0	58·8	+ 0·4	118	0	6	0·34	−0·21	28	28
	Spurn Head	70	53	66·0	54·3	59·8	+ 1·3	125	0	4	0·83	?	*	*
3. ENGLAND, E.	Hillington M	75	48	68·1	52·1	59·6	+ 0·2	123	0	2	0·90	+0·31	34	35
	Yarmouth	68	51	65·9	54·4	59·8	− 0·4	125	0	5	0·25	−0·25	*	*
	Geldeston	71	50	68·5	53·3	60·4	+ 0·2	129	0	4	0·14	−0·29	39	40
	Cambridge	75	48	69·1	52·0	60·0	− 0·9	126	0	5	0·82	+0·31	27	28
	Rothamsted	72	49	67·2	52·3	59·3	− 1·1	121	0	7	0·54	−0·05	*	*
	Ingatestone	71	48	67·9	52·2	59·7	− 1·4	124	0	4	0·37	−0·12	?25‡	?26‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	72	47	67·1	51·1	58·6	− 0·8	116	0	5	0·21	−0·37	26‡	27‡
	Loughborough	73	52	68·3	54·0	60·7	+ 0·8	131	0	2	0·35	−0·23	*	*
	Cheadle M	67	50	63·9	51·6	57·4	− 1·7	108	0	5	0·66	−0·17	*	*
	Churchstoke M	69	49	66·1	51·0	58·1	− 0·9	113	0	4	1·23	+0·69	36	37
	Hereford M	72	49	67·9	51·8	59·4	− 0·7	122	0	4	0·99	+0·30	*	*
	Cirencester	68	50	65·3	51·3	57·9	− 2·3	111	0	4	0·43	−0·32	30	31
	Oxford	69	51	66·6	53·6	59·7	− 1·2	124	0	5	0·24	−0·30	28	29
5. ENGLAND, S.	London	75	50	69·7	53·3	61·0	− 0·8	133	0	3	0·26	−0·26	26‡	27‡
	Strathfield Turgiss M	70	47	68·2	50·6	58·9	− 2·0	118	0	?	?	?	*	*
	Dungeness	70	52	66·3	56·7	61·2	+ 0·3	134	0	3	0·11	−0·39	*	*
	Hastings (St. Leonard's)	71	52	66·3	55·4	60·5	− 0·4	130	0	2	0·06	−0·52	45	46
	Southampton	71	52	66·8	55·1	60·6	− 0·5	130	0	5	0·37	−0·23	33	34
	Hurst Castle	69	56	65·6	57·7	61·4	+ 0·6	136	0	6	0·25	−0·34	*	*
	Stowell M	67	49	64·6	52·2	58·0	− 1·8	112	0	6	0·36	?	26‡	27‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	67	45	62·7	53·8	58·0	+ 1·3	112	0	7	2·92†	+1·77	*	*
	Glasgow	66	52	63·5	54·7	58·8	+ 2·8	118	0	7	0·79	−0·11	19	19
	Ardrossan	70	52	63·3	54·6	58·7	+ 2·0	117	0	4	0·33	−0·58	*	*
	Glenlee S	66	50	63·4	52·5	57·6	+ 2·3	109	0	7	1·38	?	*	*
	Douglas (Isle of Man)	66	50	62·4	53·4	57·6	+ 0·1	109	0	6	0·53	−0·32	32	32
7. ENGLAND, N.W.	Newton Reigny (Penrith)	68	45	63·7	51·6	57·3	+ 0·3	107	0	7	1·19	+0·45	27	27
	Barrow-in-Furness	65	53	62·0	54·7	58·1	− 1·3	113	0	5	1·13	+0·29	*	*
	Stonyhurst	67	52	63·4	53·4	58·1	− 0·6	113	0	6	1·46	+0·39	24	24
	Blackpool M	67	52	63·4	54·0	58·4	− 1·4	115	0	5	0·78	+0·09	31	31
	Manchester	69	50	64·8	52·9	58·5	− 1·1	116	0	7	1·32	+0·52	*	*
	Liverpool Obsy (Bidston)	68	51	65·1	53·9	59·2	− 0·6	120	0	7	0·65	−0·01	*	*
	Llandudno M	67	53	65·5	54·7	59·8	− 0·1	125	0	6	0·49	−0·13	23	23
	Holyhead	65	54	63·4	55·3	59·1	− 0·1	120	0	6	0·61	−0·07	*	*
8. ENGLAND, S.W.	Llandovery	71	50	68·4	53·3	60·4	+ 1·4	129	0	7	2·03	+0·96	*	*
	Pembroke	63	55	61·9	56·9	59·3	+ 1·1	121	0	6	0·58	−0·11	44	45
	Arlington (N. Devon)	67	51	64·6	52·9	58·4	− 0·2	115	0	7	0·98	+0·27	*	*
	Cullompton M	69	50	66·0	52·5	58·9	− 1·4	118	0	7	0·74	+0·06	34	35
	Falmouth	66	50	64·7	55·3	59·7	− 0·7	124	0	6	0·74	−0·16	41	42
	Plymouth	69	54	65·4	56·8	60·8	− 0·7	132	0	7	0·75	+0·05	39	40
	Prawle Point	64	51	61·7	53·7	57·2	− 1·5	106	0	7	0·35	?	*	*
9. IRELAND, N.	Malin Head	66	52	62·7	54·1	58·1	+ 1·5	113	0	7	1·10	?	*	*
	Londonderry	70	51	66·6	52·8	59·3	+ 1·8	121	0	6	0·85	0·00	*	*
	Mullaghmore	67	52	64·4	54·3	59·1	+ 0·6	120	0	6	0·69	−0·11	*	*
	Belmullet	64	53	62·1	55·3	58·2	+ 1·0	113	0	7	1·52	?	*	*
	Markree Castle	66	50	64·4	51·7	57·7	− 0·3	110	0	7	1·34	+0·53	38	38
	Brookeborough	67	49	65·0	51·3	57·7	− 0·5	110	0	7	1·10	?	*	*
	Armagh	67	50	64·6	51·9	57·9	− 0·3	111	0	6	0·92	+0·29	29	29
	Donaghadee	69	53	64·0	54·7	59·1	+ 1·9	120	0	6	1·36	+0·66	*	*
	Edgeworthstown	67	47	65·0	50·1	57·1	− 1·2	106	0	7	1·09	+0·30	*	*
10. IRELAND, S.	Dublin	68	54	66·2	55·5	60·5	+ 1·9	130	0	4	0·28	−0·35	40	41
	Parsonstown	68	49	65·4	53·3	59·0	+ 0·5	119	0	5	0·31	−0·49	52	53
	Kilkenny	68	50	66·0	52·9	59·1	+ 0·8	120	0	7	1·00	+0·25	*	*
	Waterford	71	52	66·4	53·9	59·8	+ 1·0	125	0	6	1·07	+0·22	*	*
	Roche's Point	66	51	64·3	55·0	59·4	− 0·1	122	0	6	1·68	+0·81	*	*
	Valencia	67	49	64·3	55·7	59·7	+ 1·0	124	0	7	1·44	+0·36	47	48
	Killarney	67	45	64·8	52·9	58·5	− 0·6	116	0	7	1·66	?	*	*
	Foynes	67	47	64·9	52·6	58·4	+ 0·2	115	0	7	0·83	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	68	56	65·0	56·9	60·7	0·0	131	0	6	0·37	−0·22	*	*
	Jersey	70	57	66·0	57·4	61·2	− 0·5	134	0	3	0·12	−0·41	45	47

Stations marked M are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 35.] *Second Series.* WEEK ENDING MONDAY, 3RD SEPTEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 140.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	66	41	58·0	47·0	52·2	1 below.	71	−12	0	0	1168	−214	711	+201
	1. SCOTLAND, EAST	69	36	61·6	46·3	53·5	1 below.	81	−19	0	0	1417	−388	700	+157
	2. ENGLAND, N.E.	69	44	61·9	48·6	54·9	2 below.	90	−22	0	0	1512	−416	555	+ 73
	3. ENGLAND, EAST	70	36	63·3	48·6	55·5	4 below.	95	−30	0	0	1898	−340	661	+154
	4. MIDLAND COUNTIES	71	36	63·1	46·4	54·3	5 below.	86	−36	0	0	1826	−402	654	+150
	5. ENGLAND, SOUTH	69	38	63·8	50·7	56·9	3 below.	104	−28	0	0	1968	−439	577	+294
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	69	40	59·7	48·4	53·7	2 below.	82	−23	0	0	1605	−238	505	+107
	7. ENGLAND, N.W.	63	41	59·8	50·4	54·8	4 below.	90	−23	0	0	1690	−322	500	+117
	8. ENGLAND, S.W.	68	36	61·8	48·9	55·0	4 below.	91	−30	0	0	1863	−415	487	+254
	9. IRELAND NORTH	65	38	59·7	49·2	54·1	3 below.	85	−20	0	0	1719	−258	417	+ 67
	10. IRELAND, SOUTH	66	41	61·5	50·2	55·7	3 below.	95	−17	0	0	1996	−237	352	+113
	— CHANNEL ISLANDS	69	50	63·3	54·9	58·8	2 below.	118	−13	0	0	2124	−316	247	+154

Rainfall. **Bright Sunshine.**

	DISTRICTS. (See p. 140.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	7	15	6 more.	160	+13	26·0	−1·1	18	19	981	+ 27	29	+ 1
	1. SCOTLAND, EAST	6	6	2 less.	142	+15	20·4	+0·4	29	30	994	−109	30	− 3
	2. ENGLAND, N.E.	5	9	3 more.	131	+ 9	18·9	+1·5	25	26	850	−154	26	− 5
	3. ENGLAND, EAST	6	13	7 more.	134	+10	18·1	+1·7	33	35	925	−297	28	−10
	4. MIDLAND COUNTIES	4	13	6 more.	122	0	17·8	−0·8	31	33	876	−212	27	− 7
	5. ENGLAND, SOUTH	4	10	4 more.	123	+ 6	18·7	+1·5	34	36	906	−267	28	− 8
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	5	11	4 less.	134	− 2	28·8	0·0	29	30	1037	− 18	31	− 1
	7. ENGLAND, N.W.	5	13	6 more.	134	+ 8	20·2	−2·3	26	27	933	−123	28	− 4
	8. ENGLAND, S.W.	5	18	8 more.	139	+ 6	23·9	−2·8	36	38	1101	−158	34	− 5
	9. IRELAND, NORTH	6	9	1 more.	141	−12	25·4	+2·5	20	21	922	− 58	28	− 2
	10. IRELAND, SOUTH	5	6	2 less.	128	−14	25·5	+0·1	23	27	1075	− 42	33	− 1
	— CHANNEL ISLANDS	4	7	1 more.	151	+ 8	20·5	+1·0	43	46	1242	−254	39	− 8

General Remarks.

Weather has been cloudy, unsettled, and changeable in all parts of the Kingdom, with a good deal of rain and some thunder and lightning.

Temperature has been below the mean in all districts, the deficit ranging from 1° or 2° in Scotland, to 4° in the east and west of England, and 5° in the "Midland Counties". The highest of the maxima, which were recorded on rather irregular dates, varied from 63° in "England, N.W." and 65° in "Ireland, N." to 70° in "England, E." and 71° in the "Midland Counties". The absolute minima, which were registered in most places either on August 31st or September 1st, were as low as 36° in the east of Scotland, and over eastern, central, and south-western England, and between 38° and 41° in most other districts; in "England, N.E.", however, the lowest reading was 44°, and in the "Channel Islands" 50°. Frost was experienced on the grass over the inland parts of England during the early morning of the 1st, when the exposed thermometer fell to 31° in London and to 28° at Hillington.

Rainfall has been a little less than the mean in "Scotland, E.", "Scotland, W.", and "Ireland, S.", but more in all other districts, the excess over England being considerable.

Bright sunshine does not differ materially from that recorded last week except in Ireland, where it has been less prevalent. The percentage of the possible amount of duration varied from 19 in "Scotland, N." and 21 in "Ireland, N.", to 36 in "England, S.", 38 in "England, S.W.", and 46 in the "Channel Islands".

Depressions observed.—During the earlier part of this period the barometer continued highest over the southern part of our area, while depressions moved in a south-easterly direction off our northern coasts, and some subsidiary disturbances travelled in a similar direction over various parts of our Islands. One of these secondary systems which passed over England on the 28th grew much deeper as it advanced, and caused fresh or strong gales over all our southern and south-eastern coasts. By the 31st the depressions had disappeared from our neighbourhood, but on the following day a large low pressure system appeared off our northern coasts, the barometer fell very generally, and towards the close of the week shallow disturbances again appeared in different parts of the Kingdom.

A 55569. 350.—9/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

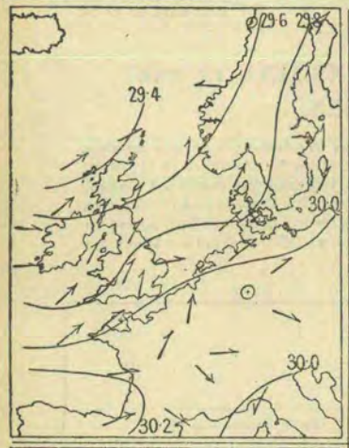
Weather

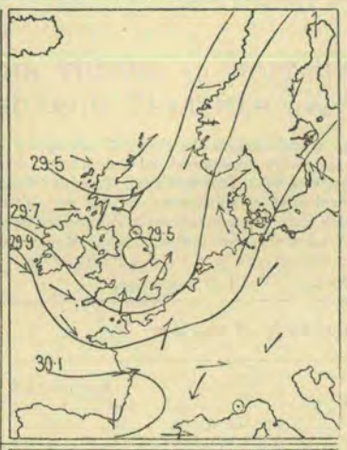
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, August 28.

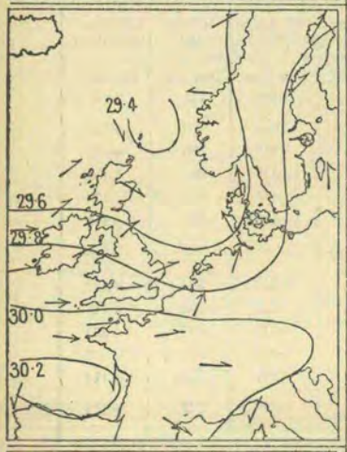
Weather rainy over all the more southern parts of our Islands, but fair in most other localities. Heavy rain falling later at all the English stations, with thunder in places.

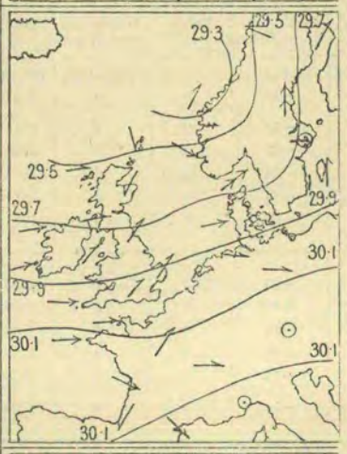
Temperature fallen a little over England and the south of France, but changed irregularly elsewhere. Maximum readings below 60° over the northern parts of Ireland and England, but above 65° in the south.

Wind chiefly South-Westerly or Southerly, but North-Westerly in the south of France; strong in force on our southern coasts. Subsequently increasing to fresh gale from South-West and West over the Channel and south of England.

Sea rough on our southern and extreme north-western coasts.

Barometer falling at all but the French and South German stations. Pressure highest over the north of Spain, but relatively high over Russia, with a large depression off the north-west of Scotland, and a shallow secondary disturbance off the south of Ireland. Secondary depression subsequently growing much deeper and travelling north-eastwards across England.





Wednesday, August 29.

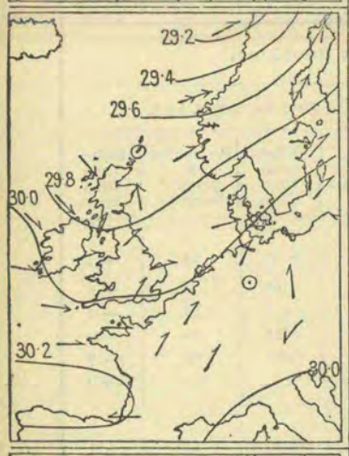
Weather fair in most places, but showery at some of our western stations, and rainy in Denmark. Showers falling generally later, with thunderstorms in many parts of England.

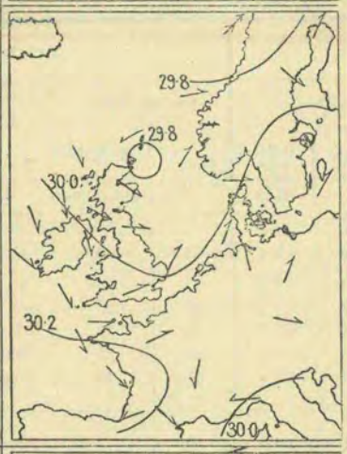
Temperature fallen a little in most places. Maximum readings below 60° at many of our western stations, but a little above 65° in the south-east.

Wind fresh Westerly or South-Westerly in our Islands, but strong from the southward on the eastern shores of the North Sea, and moderate from the Northward in the south of France. Subsequently veering to South-West in Denmark.

Sea rough on all our southern coasts.

Barometer rising in our Islands and France, but falling on the eastern shores of the North Sea. Pressure highest over the Bay of Biscay, but relatively high over Northern Europe, with lowest readings in the north of Scotland. Secondary disturbance of previous day now travelling across Denmark, but small shallow systems continuing to advance over our Islands from the westward.





Thursday, August 30.

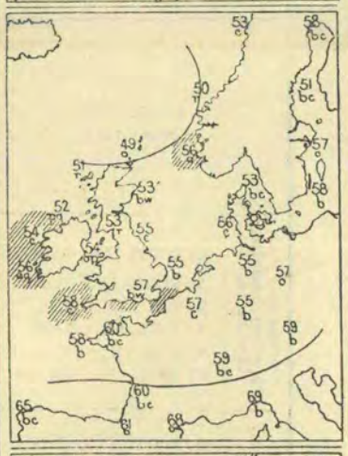
Weather fine at our eastern and many of the Continental stations, but showery on our west and north-west coasts. Showers falling generally later, with thunderstorms in several parts of Great Britain.

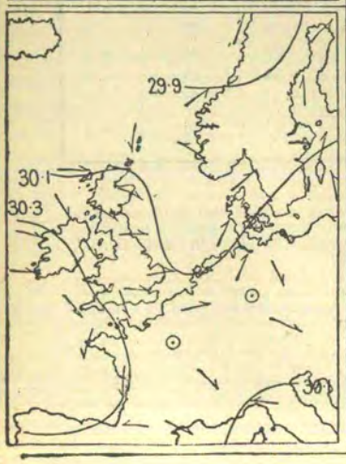
Temperature fallen generally. Maximum readings below 60° in the west and extreme north, and little above that point elsewhere.

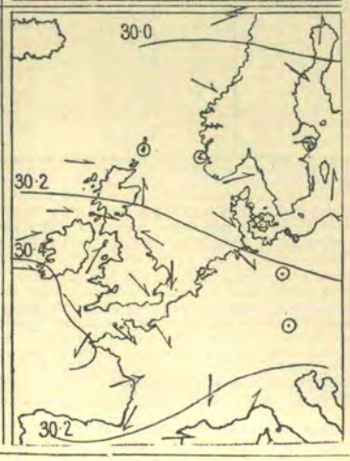
Wind North-Westerly on the west coast of our Islands and France, but South-Westerly in most other localities; moderate in force generally, but strong to a gale in the north of Scandinavia.

Sea rough on many parts of our western and southern coasts.

Barometer rising at all but the northern Scandinavian stations. Pressure highest over the Bay of Biscay and lowest in a rather deep depression lying over Finmark, but trough of "v-shaped" secondary disturbances moving eastwards across our Islands. Rise continuing all day.







Friday, August 31.

Weather fair generally, but rain falling at night on our extreme north and north-west coasts.

Temperature fallen a little in most places. Maximum readings a little higher than on previous day, but ground frost occurring over England and the south of Scotland during the ensuing night.

Wind light North-Westerly over our Islands, but Southerly in Scandinavia and Denmark and Easterly in the south of France. Subsequently backing to South-West at some of the Scotch stations.

Sea moderate to smooth.

Barometer rising generally. Secondary disturbances of previous day passing away over the North Sea, and large anticyclone advancing over our Islands from the south-westward. Rise ceasing in north later.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

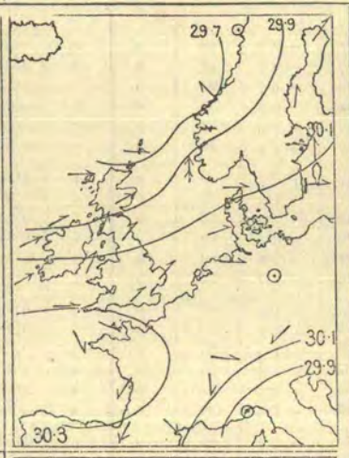
Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Saturday, September 1.

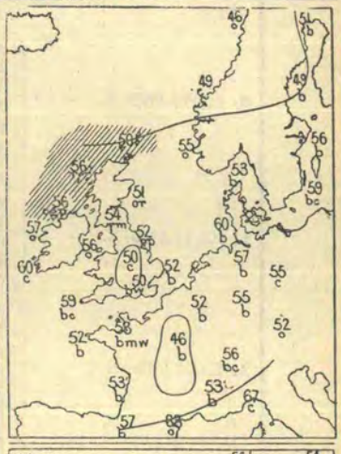
Weather dull and rainy over the northern parts of the United Kingdom, but fair or fine elsewhere. Rain extending later to most parts of north-western Europe.

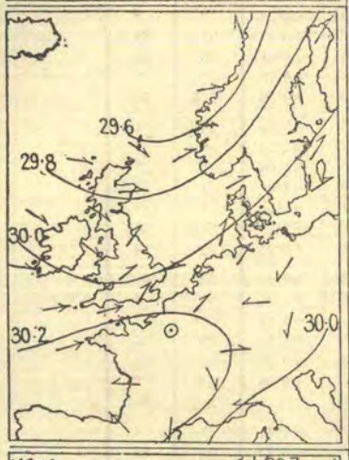
Temperature changed rather irregularly, but fallen in most places. Brisk rise taking place later in many parts of Great Britain, and thermometer reaching a maximum of 66° at Wick and Oxford and 67° in London.

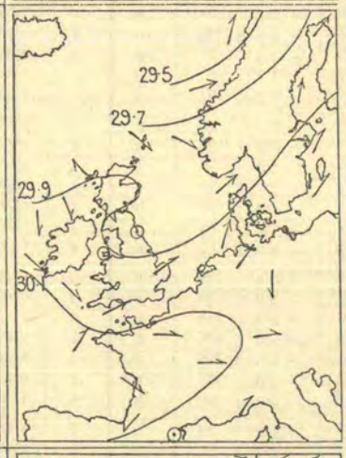
Wind fresh or strong from the South-Westward on our north and north-west coasts, but light from North-West over the Netherlands, North Germany, and the south of England, and moderate from North-East in the west of France. Subsequently backing to South-West on our southern coasts.

Sea rough in the extreme north and north-west, but moderate to smooth elsewhere.

Barometer falling in the west and north, but rising elsewhere. Large anticyclone lying over the Bay of Biscay, France, and the south of our Islands, with a depression to the northward of Scotland. Depression subsequently moving eastwards, but fall of barometer taking place generally.







Sunday, September 2.

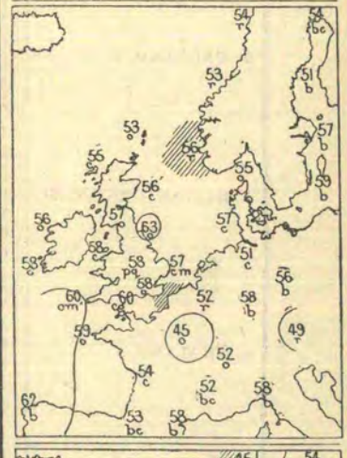
Weather fine in Sweden, North Germany, and the west and south of France, but cloudy elsewhere, with rain in Norway, and passing showers in many parts of Ireland and England.

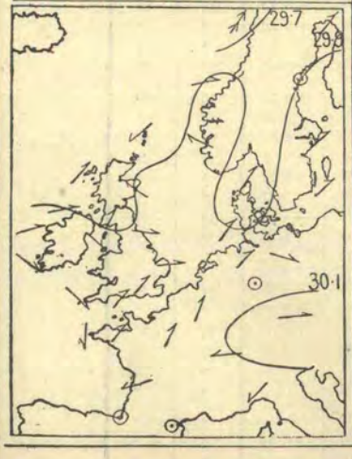
Temperature risen several degrees over the eastern half of Great Britain, and slightly in Scandinavia, but fallen elsewhere. Maximum readings below 60° on our extreme north and north-west coasts, but thermometer reaching 69° at York and 70° at Loughborough.

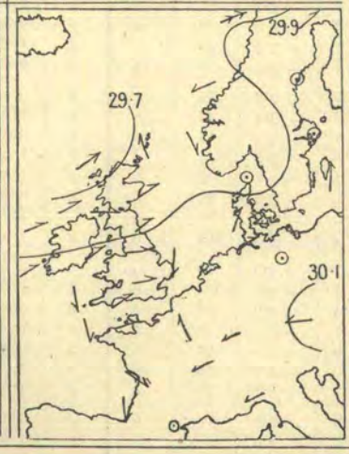
Wind North-Westerly at some of our western stations, and Easterly in the south-west of France, but South-Westerly elsewhere; moderate or fresh in force generally.

Sea rather rough at Skudesnaes and Cape Gris Nez, but moderate to smooth elsewhere.

Barometer falling generally. Anticyclone lying over the Bay of Biscay, France, and the north of Spain, and large area of low pressure to the northward of our Islands. Shallow secondary disturbances appearing later in many parts of the United Kingdom, but barometer rising in the west and north.







Monday, September 3.

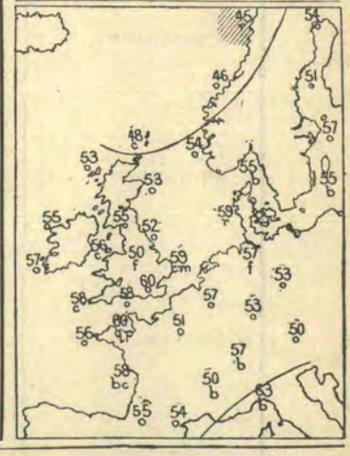
Weather fine in the south-east of France but cloudy or overcast elsewhere, with fog at some of the English stations. Showers falling later in most parts of the United Kingdom.

Temperature fallen generally. Maximum readings below 60° on our north and north-west coasts, but thermometer rising to 68° in many parts of central and eastern England, and to 70° at Cambridge.

Wind variable over our more central districts and North-Westerly in the south-west, but chiefly South-Westerly elsewhere; light to moderate in force generally.

Sea moderate to smooth.

Barometer rising at our northern and the Scandinavian stations, but falling elsewhere. Pressure highest over Germany and lowest in the north of Norway, but shallow disturbances lying over Great Britain and the North Sea. Large depression subsequently advancing towards the north-west of Scotland.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	56	43	54·9	46·3	50·3	− 2·9	58	0	6	0·83	+0·07	*	*
	Stornoway	60	44	58·0	47·9	52·7	− 0·5	75	0	7	2·49	+1·64	29	30
	Wick	66	42	60·1	46·7	53·0	− 0·7	77	0	7	1·66	+0·99	*	*
	Lairg ꝺ	62	41	59·4	46·3	52·5	− 0·8	74	0	5	0·34	−0·35	*	*
	Glencarron ꝺ	58	44	55·8	48·0	51·7	− 1·5	68	0	7	3·11†	?	7	7
	Fort Augustus ꝺ	63	42	59·9	46·5	52·8	− 1·9	76	0	7	0·65†	?	*	*
1. SCOTLAND, E.	Nairn	66	45	62·3	48·3	54·9	+ 0·1	90	0	7	0·50	−0·13	*	*
	Aberdeen	64	40	61·3	46·9	53·7	− 1·1	82	0	6	0·85	+0·12	34	35
	Braemar ꝺ	61	36	58·2	44·3	50·8	− 1·0	62	0	5	0·44	−0·47	24‡	25‡
	Ochtertyre ꝺ	69	40	63·9	46·4	54·6	+ 0·1	88	0	5	0·30	−0·54	*	*
	Leith	66	39	63·3	47·1	54·7	− 1·8	89	0	4	0·39	−0·20	*	*
	Marchmont ꝺ	63	40	60·6	45·0	52·3	− 1·7	72	0	7	0·90	+0·09	28	29
2. ENGLAND, N.E.	Alnwick Castle	63	45	59·9	48·4	53·8	− 1·6	83	0	6	0·74	+0·04	*	*
	Durham	68	44	62·1	47·7	54·5	− 1·1	88	0	6	0·92	+0·30	21	22
	Shields	66	45	61·1	48·3	54·3	− 1·4	86	0	5	0·81	+0·20	*	*
	Scarborough ℳ	68	46	62·6	49·1	55·5	− 1·4	95	0	5	1·37	+0·76	25‡	26‡
	York	69	44	63·6	47·3	55·0	− 2·3	91	0	4	1·11	+0·51	28	29
	Spurn Head	65	48	62·3	51·0	56·3	− 1·4	100	0	4	0·60	?	*	*
3. ENGLAND, E.	Hillington ℳ	69	38	63·1	47·4	54·8	− 3·4	90	0	6	1·76	+1·14	32	34
	Yarmouth	68	45	62·6	50·1	56·0	− 3·7	98	0	7	1·50	+0·92	*	*
	Geldeston	70	41	63·8	49·7	56·3	− 3·0	100	0	7	0·98	+0·49	37	39
	Cambridge	70	39	64·7	46·9	55·3	− 4·6	93	0	5	0·94	+0·41	33	35
	Rothamsted	66	36	62·5	47·8	54·7	− 4·8	89	0	5	1·34	+0·73	*	*
	Ingatestone	66	44	62·9	49·9	56·0	− 3·9	98	0	5	1·10	+0·58	31‡	33‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	71	43	64·3	46·4	54·8	− 3·8	90	0	3	1·13	+0·53	29‡	31‡
	Loughborough	70	41	64·3	47·1	55·2	− 3·5	92	0	5	1·77	+1·12	*	*
	Cheadle ℳ	65	43	60·8	46·6	53·3	− 4·6	79	0	5	1·86	+1·03	*	*
	Churchstoke ℳ	68	39	61·8	44·5	52·6	− 5·3	74	0	4	1·69	+1·04	31	33
	Hereford ℳ	70	39	64·8	45·6	54·9	− 4·4	90	0	5	0·74	+0·08	*	*
	Cirencester	66	36	62·3	46·1	53·7	− 5·7	82	0	4	1·18	+0·41	32	34
	Oxford	68	41	63·6	48·3	55·5	− 4·4	95	0	3	0·83	+0·23	32	34
5. ENGLAND, S.	London	68	41	64·4	50·3	56·9	− 3·9	104	0	5	1·42	+0·85	30‡	32‡
	Strathfield Turgiss ℳ	69	38	65·1	48·5	56·3	− 4·0	100	0	4	0·62	+0·05	*	*
	Dungeness	65	44	64·0	52·1	57·7	− 2·5	110	0	5	1·11	+0·56	*	*
	Hastings (St. Leonard's)	64	47	62·7	52·5	57·3	− 3·0	107	0	5	0·63	+0·02	33	35
	Southampton	68	42	64·8	50·2	57·1	− 2·8	106	0	4	1·61	+0·93	36	38
	Hurst Castle	68	45	64·6	52·4	58·1	− 1·9	113	0	2	0·75	+0·08	*	*
	Stowell ℳ	65	40	61·3	49·1	54·8	− 4·2	90	0	5	1·02	?	36‡	38‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	69	45	60·7	49·6	54·8	− 1·0	90	0	7	2·72†	+1·41	*	*
	Glasgow	60	43	58·9	48·3	53·3	− 2·1	79	0	6	0·73	−0·19	22	23
	Ardrossan ꝺ	62	45	59·1	51·7	55·2	− 0·6	92	0	5	0·35	−0·56	*	*
	Glenlee ꝺ	64	40	59·7	43·4	51·1	− 3·2	64	0	6	1·02	?	*	*
	Douglas (Isle of Man)	62	43	59·9	49·0	54·1	− 2·5	85	0	3	0·42	−0·46	35	37
7. ENGLAND, N.W.	Newton Reigny (Penrith)	62	41	59·4	46·1	52·4	− 3·6	73	0	6	0·42	−0·35	23	24
	Barrow-in-Furness	61	50	59·3	52·7	55·8	− 2·4	97	0	4	1·32	+0·45	*	*
	Stonyhurst	62	46	58·8	48·9	53·6	− 4·1	81	0	6	3·05	+2·04	25	26
	Blackpool ℳ	62	51	59·5	53·8	56·5	− 2·3	102	0	5	1·21	+0·47	28	29
	Manchester	63	45	60·1	47·4	53·4	− 5·1	80	0	5	1·63	+0·77	*	*
	Liverpool Obsy (Bidston)	62	46	59·7	51·0	55·1	− 3·8	92	0	6	0·99	+0·27	*	*
	Llandudno ℳ	62	49	60·2	50·6	55·2	− 4·2	92	0		1·12	+0·43	26	27
	Holyhead	63	50	61·0	52·4	56·4	− 2·3	101	0	6	1·00	+0·30	*	*
8. ENGLAND, S.W.	Llandovery	68	36	64·1	43·3	53·1	− 5·3	78	0	6	3·29	+2·12	*	*
	Pembroke	60	50	58·9	53·9	56·3	− 0·6	100	0	5	1·73	+0·98	41	44
	Arlington (N. Devon)	63	43	61·0	46·6	53·4	− 4·2	80	0	6	3·71	+2·46	*	*
	Cullompton ℳ	67	37	63·8	46·7	54·7	− 4·8	89	0	6	0·83	+0·07	29	31
	Falmouth	63	49	61·1	51·3	55·9	− 3·8	97	0	5	0·69	−0·29	39	42
	Plymouth	66	45	63·4	51·3	57·0	− 3·7	105	0	4	1·01	+0·20	33	35
	Prawle Point	63	46	60·4	49·4	54·6	− 3·1	88	0	2	1·00	?	*	*
9. IRELAND, N.	Malin Head	60	50	58·0	51·9	54·8	− 0·9	90	0	6	1·33	?	*	*
	Londonderry	63	45	60·8	49·1	54·6	− 2·0	88	0	6	1·10	+0·24	*	*
	Mullaghmore	61	50	59·7	51·4	55·3	− 2·3	93	0	7	1·16	+0·24	*	*
	Belmullet	60	47	58·3	52·1	55·0	− 1·5	91	0	7	0·89	?	*	*
	Markree Castle	61	43	59·6	47·3	53·1	− 4·3	78	0	7	0·78	−0·01	24	25
	Brookeborough	62	38	59·3	45·6	52·0	− 5·4	70	0	4	0·81	?	*	*
	Armagh	61	44	60·1	47·5	53·4	− 4·0	80	0	6	0·57	−0·11	15	16
	Donaghadee	65	48	61·7	51·7	56·4	+ 0·1	101	0	7	0·47	−0·35	*	*
	Edgeworthstown	62	42	59·7	46·3	52·6	− 5·0	74	0	6	0·70	−0·09	*	*
10. IRELAND, S.	Dublin	65	48	61·2	50·5	55·6	− 2·1	95	0	5	0·33	−0·29	22	23
	Parsonstown	62	43	60·7	48·9	54·5	− 3·5	88	0	6	0·53	−0·28	23	24
	Kilkenny	63	41	60·6	48·9	54·4	− 3·3	87	0	4	0·28	−0·47	*	*
	Waterford	66	45	64·4	49·4	55·5	− 1·6	102	0	4	0·35	−0·51	*	*
	Roche's Point	64	50	61·7	51·0	56·0	− 2·7	98	0	4	0·62	−0·28	*	*
	Valencia	64	49	61·9	51·4	56·3	− 1·9	100	0	6	0·95	−0·14	32	34
	Killarney	64	44	61·2	49·6	55·1	− 3·4	92	0	6	0·96	?	*	*
	Foynes	63	49	60·2	51·5	55·6	− 2·1	95	0	6	1·10	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	65	54	61·9	55·0	58·2	− 2·4	113	0	6	0·60	−0·06	*	*
	Jersey	69	50	64·6	54·7	59·4	− 1·9	122	0	2	0·81	+0·19	43	46

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ꝺ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 36.] *Second Series.* WEEK ENDING MONDAY, 10TH SEPTEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 144.)	Observed during the Week. Highest.	Observed during the Week. Lowest.	Averages of Daily Maxima.	Averages of Daily Minima.	Averages of Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	For the Week. Difference from Mean.	For the Week. Below 42°	For the Week. Difference from Mean.	From January 3, 1888. Above 42°.	From January 3, 1888. Difference from Mean.	From January 3, 1888. Below 42°.	From January 3, 1888. Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	65	33	57·1	43·8	50·1	3 below.	57	−20	0	0	1225	−236	711	+201
	1. SCOTLAND, EAST	68	30	59·1	43·7	51·1	3 below.	64	−28	0	0	1481	−418	700	+157
	2. ENGLAND, N.E.	67	43	58·8	48·4	53·3	2 below.	79	−26	0	0	1591	−439	555	+ 73
	3. ENGLAND, EAST	69	43	62·0	49·6	55·5	3 below.	95	−23	0	0	1993	−355	661	+154
	4. MIDLAND COUNTIES	67	38	61·3	47·1	53·9	4 below.	83	−35	0	0	1909	−424	654	+150
	5. ENGLAND, SOUTH	68	39	62·9	49·3	55·8	3 below.	97	−29	0	0	2065	−459	577	+204
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	64	34	58·6	46·5	52·3	2 below.	72	−26	0	0	1677	−311	505	+107
	7. ENGLAND, N.W.	64	33	58·9	49·0	53·7	3 below.	82	−25	0	0	1772	−344	500	+117
	8. ENGLAND, S.W.	67	34	61·2	47·3	53·9	4 below.	83	−32	0	0	1949	−442	487	+264
	9. IRELAND NORTH	65	34	58·9	48·1	53·3	3 below.	79	−20	0	0	1798	−275	417	+ 67
	10. IRELAND, SOUTH	68	35	60·9	47·5	53·9	3 below.	83	−23	0	0	2079	−260	352	+113
	— CHANNEL ISLANDS	66	45	61·6	53·1	57·1	3 below.	106	−20	0	0	2230	−334	247	+154

Rainfall. **Bright Sunshine.**

	DISTRICTS. (See p. 144.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	Rainfall. From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	4	6	3 less.	164	+13	26·6	−1·4	20	22	1001	+ 15	29	0
	1. SCOTLAND, EAST	3	2	6 less.	145	+15	20·6	−0·1	30	32	1024	−115	30	− 3
	2. ENGLAND, N.E.	4	7	0 (average).	135	+ 9	19·6	+1·5	23	25	873	−159	26	− 5
	3. ENGLAND, EAST	5	5	2 less.	139	+11	18·6	+1·6	22	24	948 *	−304	28	−10
	4. MIDLAND COUNTIES	4	5	2 less.	126	+ 1	18·3	−1·0	28	31	904	−213	27	− 6
	5. ENGLAND, SOUTH	5	4	3 less.	128	+ 8	19·1	+1·3	33	36	939	−263	28	− 8
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	3	4	8 less.	137	− 4	29·2	−0·8	31	34	1068	− 22	32	0
	7. ENGLAND, N.W.	4	4	4 less.	138	+ 8	20·6	−2·7	28	30	961	−127	29	− 3
	8. ENGLAND, S.W.	3	4	6 less.	142	+ 5	24·3	−3·5	40	45	1141	−159	34	− 5
	9. IRELAND, NORTH	3	4	4 less.	144	−13	25·8	+2·1	20	21	942	− 65	28	− 2
	10. IRELAND, SOUTH	2	2	7 less.	130	−17	25·7	−0·5	40	44	1115	− 36	33	− 2
	— CHANNEL ISLANDS	3	2	5 less.	154	+ 7	20·7	+0·5	51	56	1293	−239	39	− 7

General Remarks.

Weather has continued rather unsettled in all parts of the Kingdom, with occasional falls of rain. Thunderstorms occurred over central and eastern England on the 7th, and on the 9th thunder and lightning were prevalent at many of our southern and eastern stations.

Temperature has again been below the mean, the deficit varying from 2° to 4°. The highest of the maxima were recorded either on the 4th or 5th, when the thermometer rose to between 64° and 69°. The lowest of the minima, which were registered towards the end of the period, ranged from 30° to 34° in Scotland, from 34° to 35° in Ireland, and from 33° to 43° over England.

Rainfall has about equalled the mean in "England, N.E.", but in all other districts it has been less, the deficit being most marked in the "Grazing Districts" and the east of Scotland.

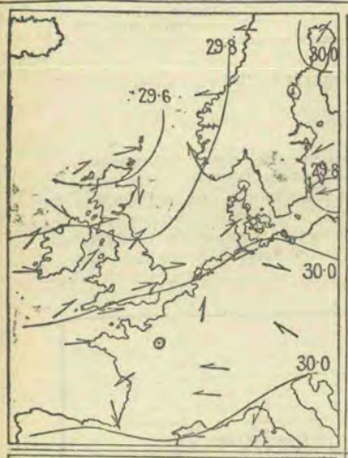
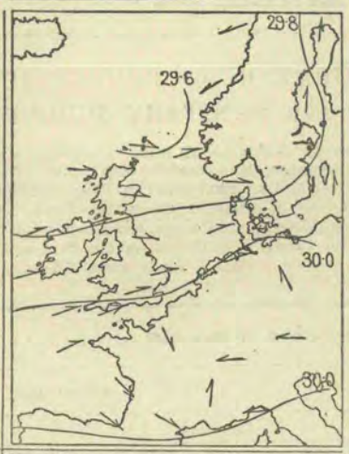
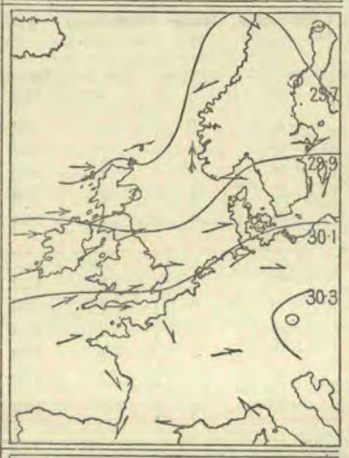
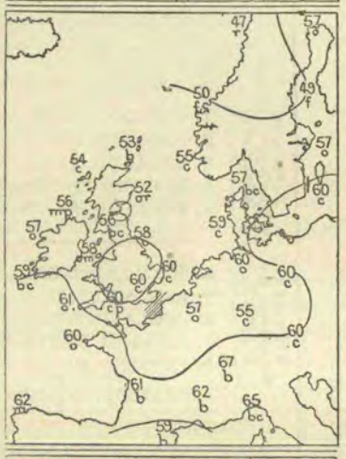
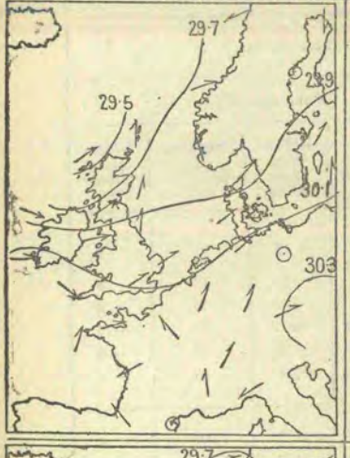
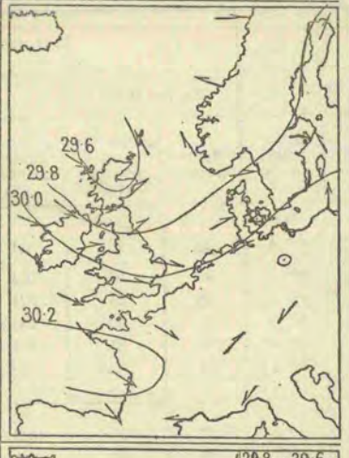
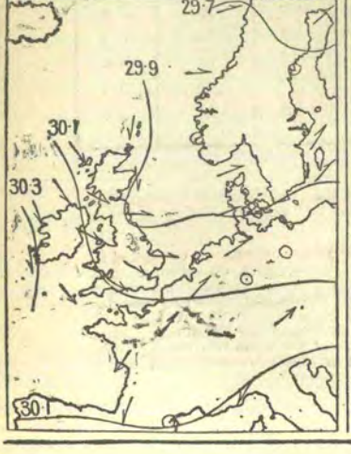
Bright sunshine has been more prevalent than it was last week in Scotland, the south of Ireland, the south-west of England, and the "Channel Islands", but in nearly all other districts a decrease is shown. The percentage of the possible amount of duration ranged from 21 in "Ireland, N." to 44 in "Ireland, S.", 45 in "England, S.W.", and 56 in the "Channel Islands".

Depressions observed.—During the earlier part of this period depressions continued to move in an easterly direction to the northward of our Islands, and a few subsidiary disturbances in a similar direction over different parts of England. By the 7th, however, the barometer had risen quickly on our north-western coasts, and from this time depressions were shown in the eastern and south-eastern parts of our area; at the end of the period a shallow disturbance lay over the southern portion of the North Sea. None of the depressions observed were of any great depth and the wind was consequently moderate to fresh in force—at first from the Westward or South-Westward and subsequently from the Northward.

* This value has been altered owing to the receipt of further information.

A 55619. 350.—9/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

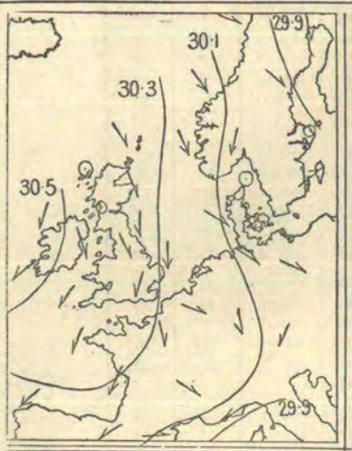
Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, September 4.** *Weather* fair over Germany, the greater part of France, and the eastern parts of the United Kingdom, but cloudy elsewhere, with rain at several of our western stations. Showers falling later in nearly all parts of our Islands. *Temperature* fallen a little in the south-east of England, but risen elsewhere. Maximum readings above 65° over Central England, but below 60° on our extreme north and north-west coasts. *Wind* light or moderate from the South-Westward over our Islands and the North Sea, but Easterly in France and the north-west of Norway. Subsequently shifting to North-Westward in the west of France. *Sea* rather rough off the west of Norway, but moderate to smooth elsewhere. *Barometer* falling at all but the French and German stations. Broad band of high pressure lying over Germany, France, and the Bay of Biscay, and small anticyclonic system over the north of Sweden, with a large depression off the north of Scotland. Slight rise taking place over our Islands later.	
		**Wednesday, September 5.** *Weather* fine over France and Spain, but cloudy elsewhere, with misty showers in many parts of our Islands. Some improvement taking place over England later. *Temperature* risen in most places. Maximum readings above 65° in nearly all parts of England. *Wind* light or moderate from the Westward or South-Westward over our Islands, the North Sea, and the north of France, but variable in Scandinavia, and Easterly in the south of France. *Sea* moderate to smooth. *Barometer* rising at all but the Swedish stations. Broad band of high pressure still extending from south Germany to the Bay of Biscay, with a large shallow depression over the north of Scandinavia and another off the north of Scotland. Rise continuing all day.	
		**Thursday, September 6.** *Weather* rainy on our extreme north-west coasts, as well as at the Norwegian and some of our southern stations, but fair or fine elsewhere. Showers falling generally later. *Temperature* fallen a little in our Islands, but changed irregularly elsewhere. Maximum readings below 60° at all our north-western and extreme northern stations, but a little above 65° in the extreme south. *Wind* moderate Westerly on our western coasts, and South-Westerly or Southerly in most other districts, but light from the Eastward in the south of France. Subsequently veering to West in most parts of our Islands. *Sea* rather rough on our extreme west and south-west coasts, but moderate to smooth elsewhere. *Barometer* falling at all but the Swedish stations. Broad band of high pressure still extending from Germany to the Bay of Biscay, with a well-marked depression off the north-west of Scotland. Depression subsequently moving eastwards, and barometer rising again on our western coasts.	
		**Friday, September 7.** *Weather* fair generally, but showery in the northern parts of our Islands, and rainy in the north of Scandinavia. Showers falling later in most parts of Great Britain, and thunderstorms occurring over our midland and eastern counties. *Temperature* fallen at all but the Swedish and southern French stations. Maximum readings below 60° on many parts of our western and northern coasts. *Wind* strong from the North-Westward in the west and north of our Islands, but light or moderate from the Westward in the east of England, and from the South-Westward over Denmark, Germany, and the south of Scandinavia. Subsequently veering to the North-Westward or Northward on all our coasts. *Sea* rough at some of our western and north-western stations. *Barometer* rising in our Islands, but falling at most of the Continental stations. Pressure now highest off the south-west of Ireland, and lowest over the north of Scandinavia, but shallow depressions lying over Norway and the North Sea. Depressions subsequently moving away eastwards.	

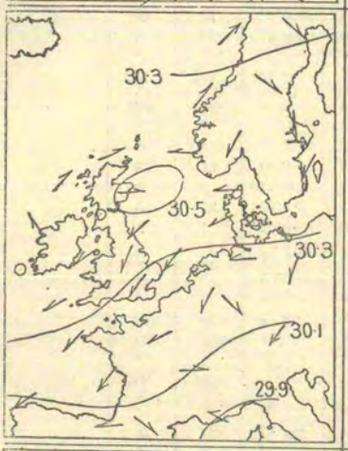
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

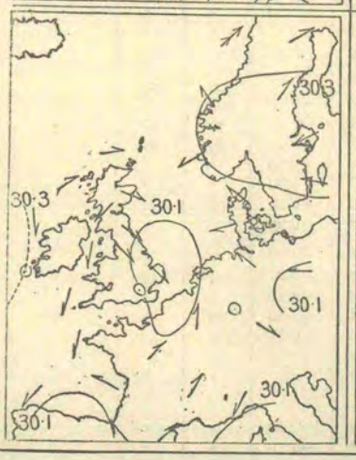
Synoptic Charts.

PRESSURE AND WIND.

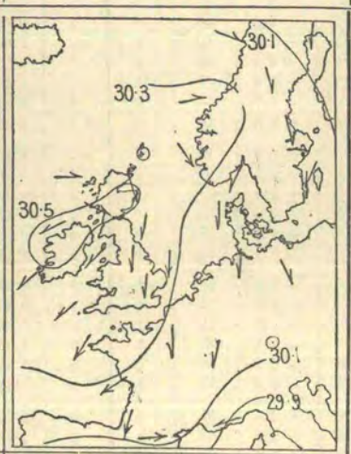
8 a.m.

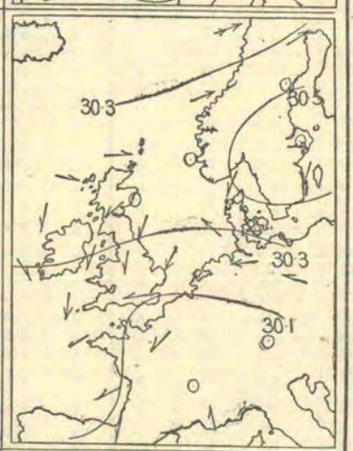






6 p.m.





Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, September 8.

Weather fair generally, but rainy at some of the German stations. Showers falling later in the south-east of England.

Temperature fallen generally. Maximum readings below 60° at all but our extreme south-western and southern stations.

Wind chiefly Northerly,—inclining to North-West in the north and to North-East in the south; fresh in force at our eastern and many of the Continental stations.

Sea moderate to smooth generally.

Barometer rising at all stations. Well defined anticyclone lying over and to the westward of Ireland, with low pressures over Sweden. Anticyclone subsequently moving north-eastwards across our northern districts, and slight fall of barometer setting in on our south-west coasts.

Sunday, September 9.

Weather rainy in the south-east of England and dull at several of our northern stations, but fair or fine elsewhere. Some improvement taking place in south-east later. Lightning seen over southern England at night.

Temperature risen a little over Norway, Denmark, and Scotland, but fallen elsewhere. Maximum readings below 60° at all but our south-eastern stations and below 55° in several parts of our northern districts, with a frost in Scotland at night.

Wind South-Westerly on the northern coasts of Scotland and Norway, but North-Easterly elsewhere; fresh or strong in force at some of our eastern and southern stations.

Sea rather rough off the east of England, but moderate to smooth elsewhere.

Barometer falling at all but the Scandinavian and Danish stations. Broad anticyclonic band extending from the Baltic to the north and west of our Islands, with low pressure over the south of Spain and the western parts of the Mediterranean, and a small depression off the south-east of England. Fall of barometer subsequently becoming general.

Monday, September 10.

Weather rainy in the east of England, and dull over Germany and the Netherlands, but fair or fine elsewhere. Showers falling later at all but our western and some of our southern stations.

Temperature changed little or irregularly. Maximum readings below 60° in many parts of our Islands.

Wind moderate from the Eastward in Denmark, and from the Northward over Ireland, England, and the north of France, but light from West in Scotland, and variable over Germany and Central France.

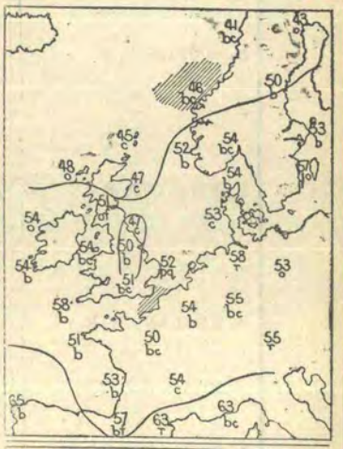
Sea moderate to smooth.

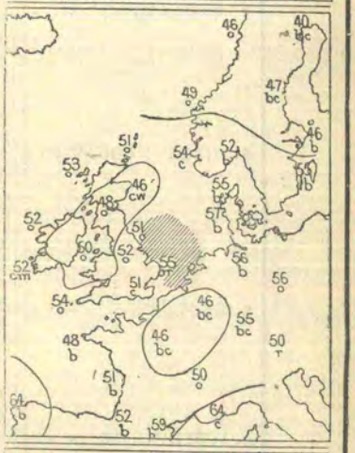
Barometer falling at all but our southern and the French stations. Anticylonic systems lying respectively over the Baltic and to the westward of Ireland, with a large shallow depression off the east of England, and other disturbances in various parts of central and southern Europe. Slight rise taking place in west later.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending Aug. 20	Ingatestone	67	43	62·2	45 7	53·4	− 8·5	80	0	3	0·37	− 0·10	23	23
„ „ 27	Ingatestone	—	—	—	—	—	—	—	—	—	—	—	28	29
„ „ 27	Strathfield Turgiss	—	—	—	—	—	—	—	—	2	0·20	− 0·32	*	*

III.—DATA from which the SUMMARY on page 141 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	57	41	55·1	45·9	50·3	− 2·0	58	0	2	0·06	−0·72	*	*
	Stornoway	60	40	56·7	44·6	50·4	− 1·8	59	0	6	1·08	+0·18	19	21
	Wick	62	36	57·3	43·1	49·9	− 3·2	55	0	3	0·16	−0·43	*	*
	Lairg Ⓢ	65	36	58·6	42·4	50·1	− 2·3	57	0	5	0·40	−0·32	*	*
	Glencarron Ⓢ	60	39	56·1	43·7	49·6	− 2·7	53	0	5	1·33†	?	20	22
	Fort Augustus Ⓢ	60	33	58·9	42·8	50·5	− 3·9	60	0	5	0·60†	?	*	*
1. SCOTLAND, E.	Nairn	63	32	59·6	43·6	51·2	− 2·6	64	0	3	0·17	−0·46	*	*
	Aberdeen	65	37	58·7	44·3	51·2	− 2·7	64	0	4	0·07	−0·68	30	32
	Braemar Ⓢ	61	30	57·2	41·6	49·0	− 2·0	51	1	3	0·36	−0·53	33‡	35‡
	Ochtertyre Ⓢ	68	36	62·9	42·2	52·1	− 2·0	71	0	4	0·17	−0·70	*	*
	Leith	65	41	60·4	46·6	53·2	− 2·4	78	0	2	0·06	−0·53	*	*
	Marchmont Ⓢ	62	40	55·9	44·0	49·7	− 3·5	54	0	2	0·17	−0·68	27	29
2. ENGLAND, N.E.	Alnwick Castle	64	45	56·3	47·3	51·6	− 2·9	67	0	3	0·33	−0·37	*	*
	Durham	67	44	58·6	46·7	52·4	− 2·9	73	0	5	0·43	−0·18	26	28
	Shields	67	43	59·1	47·4	53·0	− 2·0	77	0	3	0·23	−0·38	*	*
	Scarborough ℳ	66	48	58·5	49·3	53·7	− 2·4	82	0	5	1·02	+0·34	25‡	27‡
	York	66	43	60·1	48·0	53·8	− 2·7	83	0	4	0·45	−0·20	19	21
	Spurn Head	67	49	60·0	51·4	55·5	− 1·3	95	0	4	1·45	?	*	*
3. ENGLAND, E.	Hillington ℳ	67	43	61·6	48·9	55·0	− 2·4	91	0	5	0·76	+0·07	21	23
	Yarmouth	66	48	60·9	52·0	56·2	− 2·3	99	0	5	0·47	−0·22	*	*
	Geldeston	67	45	62·2	50·0	55·8	− 2·5	97	0	5	0·33	−0·26	23	25
	Cambridge	69	43	63·9	48·0	55·6	− 3·7	95	0	5	0·30	−0·27	26	29
	Rothamsted	66	44	61·4	49·6	55·2	− 3·2	92	0	5	0·25	−0·41	*	*
	Ingatestone	65	43	62·1	49·3	55·4	− 3·4	94	0	4	0·57	0·00	17‡	19‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	67	44	60·7	48·4	54·3	− 3·1	86	0	5	0·46	−0·16	21‡	23‡
	Loughborough	66	41	62·7	48·4	55·2	− 2·4	92	0	5	0·40	−0·29	*	*
	Cheadle ℳ	64	42	59·8	46·2	52·7	− 3·9	75	0	4	0·39	−0·45	*	*
	Churchstoke ℳ	67	38	60·7	44·6	52·3	− 4·6	72	0	5	0·29	−0·39	31	34
	Hereford ℳ	67	41	62·6	46·5	54·2	− 3·8	85	0	3	0·29	−0·43	*	*
	Cirencester	62	42	60·3	47·0	53·3	− 4·8	79	0	5	1·15	+0·35	32	35
	Oxford	66	42	62·3	48·4	55·0	− 3·6	91	0	3	0·40	−0·25	?	?
5. ENGLAND, S.	London	68	43	62·4	49·6	55·7	− 4·2	96	0	6	0·28	−0·31	26‡	29‡
	Strathfield Turgiss ℳ	67	39	63·7	47·9	55·4	− 3·7	94	0	5	0·30	−0·33	*	*
	Dungeness	66	44	63·7	51·0	57·1	− 2·4	106	0	4	0·75	+0·14	*	*
	Hastings (St. Leonard's)	65	45	62·9	50·6	56·5	− 2·7	102	0	4	0·49	−0·17	39	43
	Southampton	68	42	64·5	48·7	56·2	− 2·3	99	0	6	0·27	−0·48	34	37
	Hurst Castle	66	43	62·9	50·3	56·3	− 2·5	100	0	3	0·08	−0·67	*	*
	Stowell ℳ	64	40	60·0	46·8	53·1	− 5·0	78	0	6	0·61	?	30‡	33‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	59	40	57·0	46·3	51·4	− 3·8	66	0	4	1·22†	−0·30	*	*
	Glasgow	61	41	58·3	46·7	52·2	− 2·5	71	0	4	0·27	−0·68	24	26
	Ardrossan	63	42	58·9	48·1	53·2	− 1·6	78	0	2	0·07	−0·84	*	*
	Glenlee Ⓢ	63	34	59·2	42·0	50·2	− 3·1	57	0	3	0·35	?	*	*
	Douglas (Isle of Man)	64	44	59·4	49·6	54·3	− 0·8	86	0	2	0·08	−0·80	37	41
7. ENGLAND, N.W.	Newton Reigny (Penrith)	64	33	57·4	42·6	49·6	− 5·2	53	0	4	0·18	−0·62	26	28
	Barrow-in-Furness	61	44	59·0	51·4	55·0	− 1·8	91	0	4	0·26	−0·63	*	*
	Stonyhurst	60	44	58·3	48·0	52·9	− 3·3	76	0	5	0·74	−0·42	29	32
	Blackpool ℳ	62	41	59·1	50·1	54·4	− 2·9	87	0	3	0·40	−0·45	29	31
	Manchester	62	42	59·3	47·3	53·0	− 4·2	77	0	4	0·72	−0·23	*	*
	Liverpool Obsr (Bidston)	62	45	60·0	50·3	54·9	− 3·2	90	0	4	0·38	−0·42	*	*
	Llandudno ℳ	62	44	59·5	50·7	54·9	− 3·7	90	0	4	0·44	−0·30	26	28
	Holyhead	61	45	58·9	51·7	55·1	− 2·7	92	0	3	0·28	−0·47	*	*
8. ENGLAND, S.W.	Llandovery	67	34	63·3	42·6	52·7	− 4·6	75	0	4	0·96	−0·23	*	*
	Pembroke	60	45	58·6	51·4	54·8	− 1·0	90	0	2	0·28	−0·57	41	45
	Arlington (N. Devon)	61	40	59·3	45·1	51·9	− 5·0	69	0	5	1·14	−0·11	*	*
	Cullompton ℳ	67	37	62·9	44·5	53·3	− 5·4	79	0	5	0·21	−0·65	38	42
	Falmouth	65	45	60·4	49·9	54·9	− 4·3	90	0	3	0·14	−0·97	45	50
	Plymouth	64	45	62·0	49·5	55·5	− 4·3	95	0	3	0·19	−0·76	37	41
	Prawle Point	65	40	61·6	48·1	54·5	− 2·3	88	0	2	0·11	?	*	*
9. IRELAND, N.	Malin Head	60	48	56·7	50·9	53·7	− 0·9	82	0	6	0·32	?	*	*
	Londonderry	65	45	60·3	48·1	53·9	− 1·6	83	0	4	0·52	−0·36	*	*
	Mullaghmore	62	48	59·1	50·6	54·7	− 1·7	89	0	4	0·38	−0·70	*	*
	Belmullet	59	48	57·4	50·9	54·0	− 1·6	84	0	3	0·31	?	*	*
	Markree Castle	62	40	58·8	45·8	52·0	− 4·5	70	0	4	0·33	−0·43	12	13
	Brookeborough	61	34	59·0	43·5	50·9	− 5·5	62	0	3	0·34	?	*	*
	Armagh	62	37	59·7	44·8	51·9	− 4·4	69	0	3	0·32	−0·38	28	30
	Donaghadee	64	50	59·3	51·7	55·3	0·0	93	0	2	0·54	−0·20	*	*
	Edgeworthstown	62	42	59·4	46·9	52·9	− 4·2	76	0	2	0·51	−0·28	*	*
10. IRELAND, S.	Dublin	66	43	60·3	48·7	54·2	− 2·4	85	0	3	0·26	−0·35	33	36
	Parsonstown	62	40	60·1	46·7	53·1	− 4·3	78	0	3	0·20	−0·61	36	39
	Kilkenny	64	42	60·7	46·9	53·5	− 3·6	81	0	1	0·02	−0·74	*	*
	Waterford	68	40	63·4	46·0	54·3	− 2·6	86	0	2	0·11	−0·78	*	*
	Roche's Point	65	44	61·9	49·3	55·3	− 2·3	93	0	1	0·02	−0·93	*	*
	Valencia	62	42	61·3	49·0	54·9	− 2·8	90	0	2	0·27	−0·84	51	56
	Killarney	62	35	59·9	45·8	52·5	− 5·2	74	0	2	0·12	?	*	*
	Foynes	62	43	59·6	47·5	53·3	− 4·0	79	0	3	0·45	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	64	51	60·4	53·4	56·7	− 3·1	103	0	2	0·11	−0·66	*	*
	Jersey	66	45	62·7	52·7	57·5	− 3·3	109	0	3	0·33	−0·40	51	56

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked Ⓢ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 37.] *Second Series.* WEEK ENDING MONDAY, 17TH SEPTEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 148.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	73	35	60·4	45·8	52·8	1 above.	76	+ 6	0	0	1301	−234	711	+201
	1. SCOTLAND, EAST	70	34	63·1	43·7	53·0	1 above.	77	− 6	0	0	1558	−425	700	+157
	2. ENGLAND, N.E.	70	39	61·6	46·4	53·6	1 below.	81	−13	0	0	1672	−451	555	+ 73
	3. ENGLAND, EAST	71	37	64·1	47·9	55·7	1 below.	96	− 9	0	0	2089	−336	661	+154
	4. MIDLAND COUNTIES	72	35	65·6	43·6	54·1	2 below.	85	−25	0	0	1994	−439	654	+149
	5. ENGLAND, SOUTH	74	37	66·2	47·6	56·5	1 below.	102	−12	0	0	2167	−470	577	+204
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	67	34	61·1	45·5	52·9	1 below.	76	−14	0	0	1753	−326	505	+107
	7. ENGLAND, N.W.	70	36	62·5	48·3	55·1	1 below.	92	− 6	0	0	1864	−348	500	+117
	8. ENGLAND, S.W.	71	35	64·4	46·8	55·2	1 below.	92	−17	0	0	2041	−456	487	+254
	9. IRELAND, NORTH	70	37	62·3	47·7	54·6	0 (average).	88	− 3	0	0	1886	−275	417	+ 67
	10. IRELAND, SOUTH	69	36	63·0	46·5	54·4	2 below.	87	−13	0	0	2166	−268	352	+113
	— CHANNEL ISLANDS	72	44	65·1	52·0	58·3	1 below.	114	− 7	0	0	2344	−338	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 148.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	4	4	3 less.	168	+13	27·0	−1·8	23	26	1024	+ 10	29	0
	1. SCOTLAND, EAST	2	2	6 less.	147	+13	20·8	−0·7	41	47	1065	− 98	30	− 3
	2. ENGLAND, N.E.	2	1	6 less.	137	+ 8	19·7	+1·0	42	48	915	−146	26	− 5
	3. ENGLAND, EAST	2	1	6 less.	141	+10	18·7	+1·1	43	49	991	−298	29	− 9
	4. MIDLAND COUNTIES	1	less than ½	7 less.	127	− 2	18·3	−1·8	41	46	947 *	−203	28	− 5
	5. ENGLAND, SOUTH	1	less than ½	7 less.	129	+ 6	19·1	+0·6	46	53	935	−252	29	− 8
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	2	3	8 less.	139	− 6	29·5	−1·5	36	40	1104	− 19	32	0
	7. ENGLAND, N.W.	2	1	8 less.	140	+ 6	29·7	−3·5	36	41	997	−127	29	− 3
	8. ENGLAND, S.W.	0	-	11 less.	142	+ 1	24·3	−4·5	51	58	1192	−146	35	− 4
	9. IRELAND, NORTH	2	3	6 less.	146	−15	26·1	+1·5	33	38	975	− 61	28	− 2
	10. IRELAND, SOUTH	1	2	7 less.	131	−20	25·9	−1·2	43	48	1158	− 26	34	− 1
	— CHANNEL ISLANDS	0	-	8 less.	154	+ 3	20·7	−0·4	64	73	1357	−223	40	− 6

General Remarks.

Weather has been finer and in a more settled condition generally than that experienced for many weeks past.

Temperature has not differed materially from the mean, having been 1° above it in the north and east of Scotland and the same amount below it in most other parts of the Kingdom. During the daytime the thermometer was generally high, readings of 70°, and above, being at times recorded; the nights, however, were in most instances cold, and the lowest of the minima, which occurred during the earlier half of the period, ranged from 34° in "Scotland, E." and "Scotland, W." to 39° in "England, N.E." and to 44° in the "Channel Islands".

Rainfall has been less than the mean in all districts; over England the fall has been scarcely appreciable.

Bright sunshine shows a decided increase. The percentage of the possible duration, ranged from 26 in "Scotland, N." to 53 in "England, S.", 58 in "England, S.W.", and 73 in the "Channel Islands", and had not been so high over the Kingdom generally since the week which ended 28th May.

Depressions observed.—At the commencement of the period some shallow depressions were shown over the northern and eastern parts of our area, but as these passed away the conditions became anticyclonic and no disturbances approached our neighbourhood until the 15th, when a "V shaped" system passed over our northern districts. By the end of the week this had also disappeared, and a shallow low pressure area lay off the north-west of Norway, while the barometer over our Islands was rising steadily.

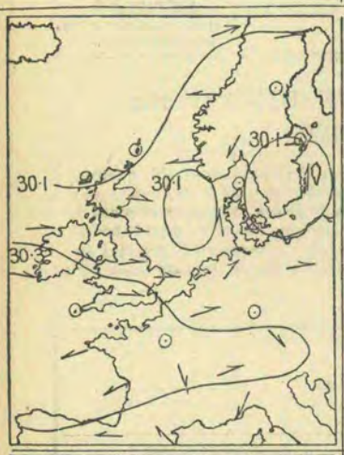
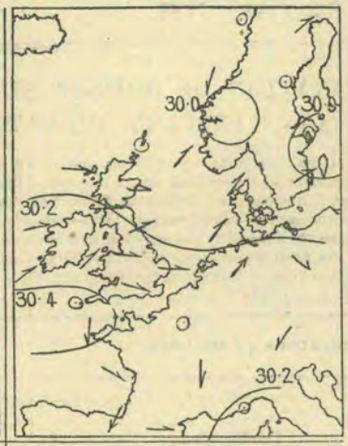
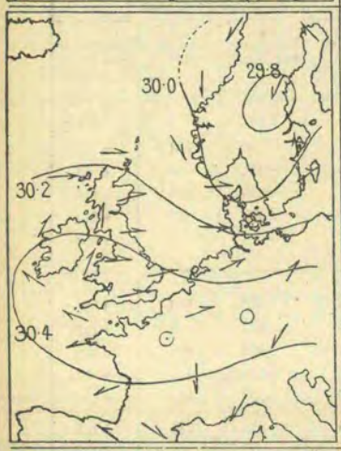
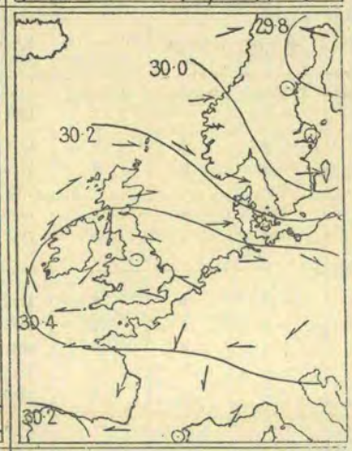
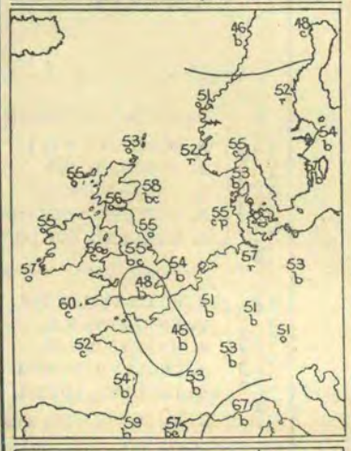
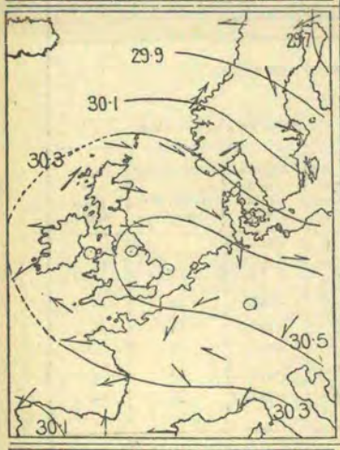
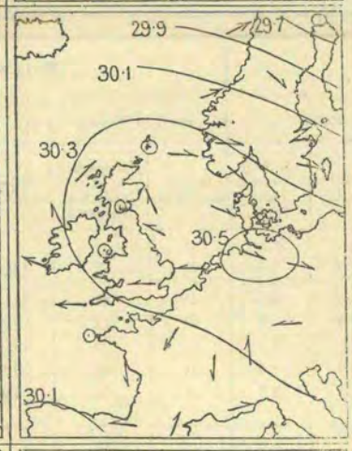
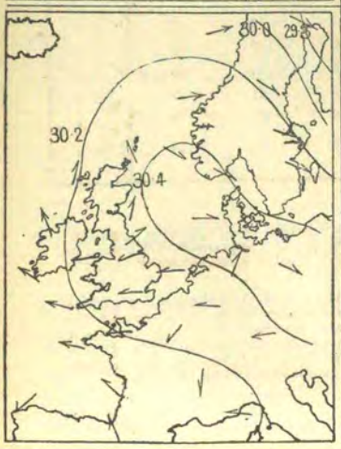
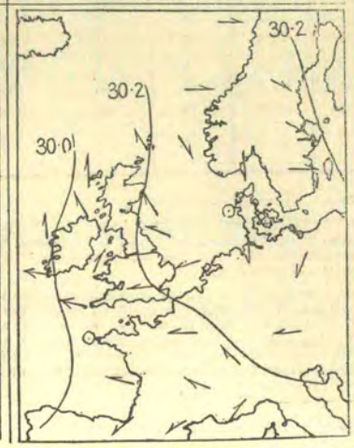
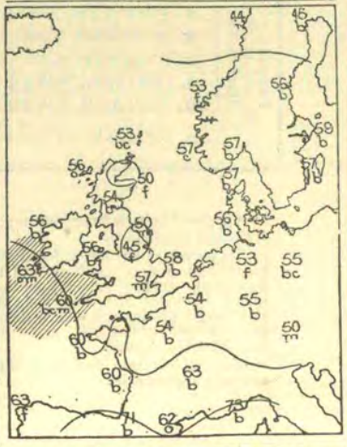
* This value has been altered owing to the receipt of further information.

A 55713. 350.—9/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

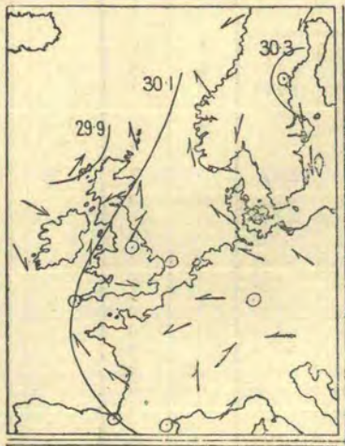
8 a.m.	6 p.m.	Weather during the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. TEMPERATURE AND WEATHER at 8 a.m.
		**Tuesday, September 11.** *Weather* fine over the greater part of Ireland, England, and France, but rainy in Scotland, Germany, and the west of Norway. *Temperature* fallen a little in Norway and the north of Sweden, but risen elsewhere. Thermometer reaching 65° over the inland parts of the south-east of England, but maxima below 60° at most of our northern stations. *Wind* light or moderate from the Westward and North-Westward over the United Kingdom, the Netherlands, and Germany, but Easterly in the west of Norway and the west and south of France. *Sea* slight or smooth. *Barometer* falling in Scandinavia, Denmark, and Scotland, but rising elsewhere. Large anticyclone lying over the Bay of Biscay, France, and the southern parts of our Islands and Germany, with shallow depressions over the North Sea, the south of Sweden, and to the northward of our Islands. Depressions subsequently moving eastwards.	
		**Wednesday, September 12.** *Weather* rainy at some of the Scandinavian and Danish stations, and dull in the extreme west and north of our Islands, but fair or fine elsewhere. *Temperature* risen at all but our south-eastern and the Scandinavian and German stations. Subsequently rising above 65° over central and south-eastern England, highest reading of all being 70° at Cambridge. *Wind* Easterly in France, South-Easterly on our south-west coasts, Westerly over the north and east of our Islands and the North Sea, and South-Westerly in the south of Sweden; light or moderate in force generally. *Sea* slight or smooth. *Barometer* rising at all but the Scandinavian stations. Large anticyclone lying over the greater part of Ireland and England, South Germany, and the north of France, with a well-marked depression over central Sweden. Depression subsequently moving away in a north-easterly direction.	
		**Thursday, September 13.** *Weather* fine generally, but foggy over England, and rainy in the Hebrides and west of Norway. Fog dispersing later. *Temperature* fallen in most parts of Great Britain and also in Sweden, but risen elsewhere. Thermometer rising during day to 70° at some of the English stations. *Wind* moderate or fresh from the Eastward over France and the south of our Islands, but South-Westerly in the north, and North-Westerly over Sweden, Denmark, and North Germany. *Sea* moderate to smooth. *Barometer* rising in the north and east of our Islands, as well as in Denmark and the south of Scandinavia, but falling elsewhere. Anticyclone lying over the Netherlands, the east of England, and South Germany, with low pressures over the north of Scandinavia. Fall taking place on our east coasts later.	
		**Friday, September 14.** *Weather* fair generally, but fog or mist reported locally, and rain falling at Bodö. Rain falling later at some of our western stations. *Temperature* risen at all but our extreme northern stations. Thermometer rising a little above 70° over the central parts of Great Britain. *Wind* moderate Easterly over the Netherlands and east of England, strong South-Easterly on the west coasts of our Islands and France, light Southerly in Scotland, and Westerly or North-Westerly in Scandinavia and Denmark. *Sea* rather rough on our extreme south-west coasts, but moderate to smooth elsewhere. *Barometer* falling at all but the Scandinavian stations. Anticyclone lying over Germany, the Netherlands, and the North Sea, with a depression over Finland, and an area of relatively low pressure to the westward of our Islands. Slight fall taking place generally later.	

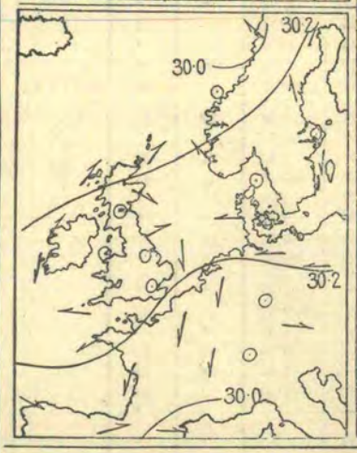
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

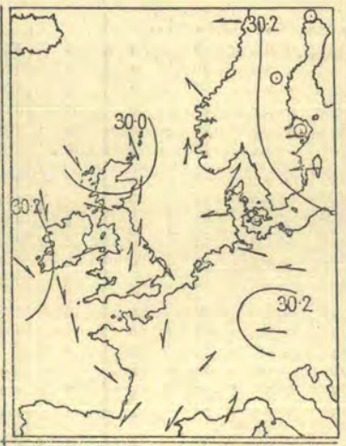
PRESSURE AND WIND.

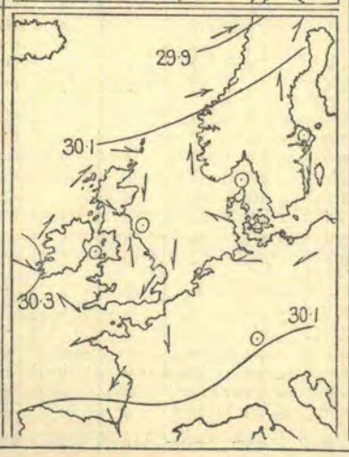
8 a.m.





6 p.m.





Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, September 15.

Weather foggy over England, and rainy on our extreme north-west coasts, but fine at most of the Continental stations. A little rain falling later in many parts of Great Britain.

Temperature fallen in Scandinavia, Denmark, and the south-east of England, but risen elsewhere. Maximum readings above 70° at many of our southern stations, but below 60° over the northern parts of Ireland and England.

Wind Southerly in the north of our Islands, and North-Westerly in the west and south of Ireland, but chiefly South-Easterly elsewhere; light or moderate in force generally, but strong on our extreme north-west coasts. Subsequently veering to the North-Westward on all our western coasts.

Sea rather rough at Stornoway, but slight or smooth elsewhere.

Barometer falling at all but our south-western and the French stations. Pressure high over Scandinavia, Denmark, and Germany, but "V-shaped" depression lying over the north-west of our Islands. Depression subsequently moving eastwards, and barometer rising in west.

Sunday, September 16.

Weather fair generally, but rainy over the Netherlands and east of England. Heavy rain falling later in some parts of Germany.

Temperature fallen several degrees in the west and north of our Islands, but risen elsewhere. Maxima over England considerably lower than on previous day.

Wind South-Westerly on our extreme north-west coasts, North-Westerly and Northerly over England, and Easterly on the west coasts of Norway and France; light or moderate in force generally.

Sea moderate to smooth.

Barometer rising at all but the Norwegian, Danish, and German stations. Anticyclones lying respectively over the Gulf of Bothnia and the south of Ireland, with shallow depressions in the intervening regions. Slight fall taking place on our west coasts later.

Monday, September 17.

Weather fair generally, but dull in the west of Ireland and north of Scandinavia, with rain at Bodö. Slight rain falling later in the extreme north of Scotland.

Temperature risen over the northern parts of our Islands and Scandinavia, but fallen elsewhere. Maximum readings a little above 72° over Central England.

Wind light South-Westerly over the northern parts of our Islands and Scandinavia, and variable over the more central parts of the United Kingdom, but North-Easterly elsewhere.

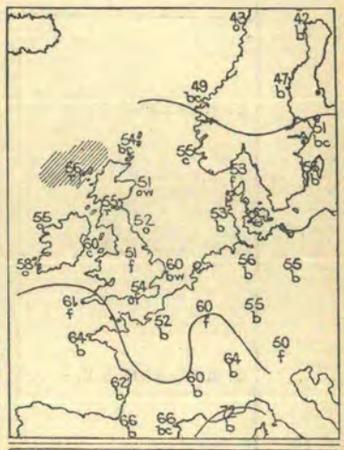
Sea moderate to smooth.

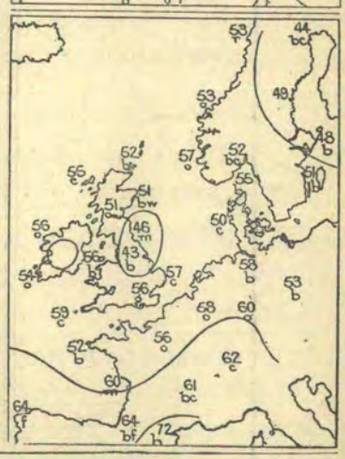
Barometer falling in the north of Scandinavia, the west of our Islands, and the south of France, but rising elsewhere. Broad band of high pressure extending south-westwards from Northern Europe to our south-west coasts, with a shallow depression off the north-west of Norway. Depression subsequently moving eastwards.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.)								Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending Sept. 10	Oxford	—	—	—	—	—	—	—	—	—	—	—	37	41

III.—DATA from which the SUMMARY on page 145 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	60	42	57·1	47·0	51·8	+ 0·5	69	0	3	0·24	−0·57	*	*
	Stornoway	63	39	59·4	47·7	53·3	+ 2·3	79	0	4	0·30	−0·66	23	26
	Wick	66	35	59·9	45·4	52·3	+ 0·4	72	0	3	0·85	+0·24	*	*
	Lairg ℳ	69	37	63·7	43·6	53·2	+ 2·2	78	0	4	0·44	−0·33	*	*
	Glencarron ℳ	73	42	60·6	46·3	53·1	+ 1·9	78	0	4	0·57†	?	23	26
	Fort Augustus ℳ	70	38	61·8	44·7	52·8	− 0·5	76	0	3	0·15†	?	*	*
1. SCOTLAND, E.	Nairn	70	38	64·3	44·0	53·7	+ 0·9	82	0	2	0·16	−0·47	*	*
	Aberdeen	66	41	61·0	44·9	52·6	− 0·2	74	0	2	0·43	−0·32	43	49
	Braemar ℳ	66	34	61·5	40·4	50·6	+ 1·0	67	4	2	0·11	−0·77	46‡	52‡
	Ochtertyre ℳ	69	39	64·7	43·6	53·7	+ 0·8	82	0	2	0·18	−0·72	*	*
	Leith	70	40	64·7	45·3	54·5	+ 0·3	88	0	2	0·20	−0·38	*	*
	Marchmont ℳ	68	40	62·4	44·0	52·8	+ 1·2	76	0	2	0·23	−0·62	34	39
2. ENGLAND, N.E.	Alnwick Castle	62	39	58·4	44·6	51·2	− 2·0	64	0	2	0·13	−0·58	*	*
	Durham	67	39	63·6	44·0	53·3	− 1·2	79	0	2	0·06	−0·54	38	44
	Shields	65	43	60·7	46·1	53·1	− 0·7	78	0	2	0·10	−0·50	*	*
	Scarborough ℳ	66	41	61·0	47·1	53·7	− 1·3	82	0	2	0·09	−0·61	45‡	51‡
	York	70	39	65·0	44·7	54·4	− 0·9	87	0	1	0·05	−0·65	43	48
	Spurn Head	62	49	60·6	51·9	56·0	+ 0·4	98	0	1	0·08	?	*	*
3. ENGLAND, E.	Hillington ℳ	66	41	62·8	48·2	55·2	− 0·4	92	0	3	0·08	−0·62	37	42
	Yarmouth	64	46	61·4	51·9	56·4	− 0·5	101	0	2	0·09	−0·65	*	*
	Geldeston	69	39	64·3	48·6	56·1	− 0·8	99	0	2	0·05	−0·59	48	54
	Cambridge	71	40	67·1	43·1	56·1	− 1·8	99	0	1	0·03	−0·55	41	47
	Rothamsted	71	37	65·1	44·8	54·5	− 2·3	88	0	1	0·02	−0·68	*	*
	Ingatestone	71	42	64·1	47·8	55·6	− 1·8	95	0	0	0·01§	−0·58	46‡	52‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	72	36	66·0	43·0	54·0	− 2·0	84	0	1	0·02	−0·62	36‡	40‡
	Loughborough	72	38	68·4	44·7	56·0	0·0	98	0	1	0·01	−0·70	*	*
	Cheadle ℳ	67	44	62·9	46·6	54·4	− 0·3	87	0	1	0·01	−0·83	*	*
	Churchstoke ℳ	67	37	64·1	40·7	52·1	− 3·2	71	0	0	—	−0·70	42	47
	Hereford ℳ	70	36	67·1	41·7	54·0	− 2·1	85	1	0	—	−0·75	*	*
	Cirencester	70	35	64·4	43·4	53·4	− 3·0	80	0	1	0·01	−0·81	40	45
	Oxford	71	40	66·1	45·1	55·1	− 1·6	92	0	0	—	−0·69	44	50
5. ENGLAND, S.	London	74	42	67·6	48·6	57·6	− 0·6	109	0	1	0·02	−0·58	36‡	41‡
	Strathfield Turgiss ℳ	74	37	67·1	43·8	54·9	− 2·3	90	0	1	0·03	−0·64	*	*
	Dungeness	66	40	63·9	47·1	55·1	− 2·8	92	0	1	0·04	−0·63	*	*
	Hastings (St. Leonard's)	68	46	64·8	51·9	58·0	+ 0·2	112	0	1	0·03	−0·67	57	65
	Southampton	74	40	68·8	47·0	57·4	+ 0·6	108	0	0	—	−0·78	50	57
	Hurst Castle	68	44	66·3	50·0	57·8	+ 0·2	111	0	0	—	−0·78	*	*
	Stowell ℳ	72	38	65·0	45·0	54·5	− 2·1	88	0	0	0·02§	?	42‡	48‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	65	40	60·7	47·6	53·8	0·0	83	0	4	0·97†	−0·71	*	*
	Glasgow	65	42	60·4	45·7	52·7	− 1·1	75	0	3	0·26	−0·71	28	32
	Ardrossan	67	45	61·3	48·9	54·8	+ 1·4	90	0	2	0·03	−0·87	*	*
	Glenlee ℳ	65	34	61·6	39·5	50·0	− 2·7	67	7	1	0·19	?	*	*
	Douglas (Isle of Man)	63	39	61·5	46·0	53·4	− 0·1	80	0	2	0·18	−0·72	43	48
7. ENGLAND, N.W.	Newton Reigny (Penrith)	66	36	61·8	41·5	51·2	− 2·3	67	1	2	0·12	−0·69	34	39
	Barrow-in-Furness	65	48	61·4	50·9	55·9	+ 0·6	97	0	2	0·08	−0·82	*	*
	Stonyhurst	65	45	61·6	47·8	54·4	− 0·2	87	0	2	0·03	−1·16	34	39
	Blackpool ℳ	68	44	62·8	49·2	55·7	+ 0·1	96	0	2	0·06	−0·84	42	48
	Manchester	68	46	62·9	48·1	55·1	− 0·5	92	0	1	0·07	−0·91	*	*
	Liverpool Obsy (Bidston)	67	47	62·3	50·0	55·9	− 0·9	97	0	1	0·02	−0·80	*	*
	Llandudno ℳ	70	45	64·1	48·7	56·0	− 1·5	98	0	1	0·02	−0·75	32	37
	Holyhead	70	47	63·1	50·4	56·5	− 0·3	102	0	2	0·29	−0·58	*	*
8. ENGLAND, S.W.	Llandovery	71	35	68·9	40·1	53·8	− 2·2	91	5	0	—	−1·19	*	*
	Pembroke	63	48	60·9	51·1	55·8	+ 1·0	97	0	0	—	−0·91	54	62
	Arlington (N. Devon)	71	39	64·3	46·3	54·9	− 0·9	90	0	0	—	−1·24	*	*
	Cullompton ℳ	70	35	65·8	41·5	53·1	− 4·4	80	1	0	—	−0·90	42	48
	Falmouth	66	45	61·9	50·4	55·9	− 2·0	97	0	0	—	−1·20	50	57
	Plymouth	69	42	65·6	49·1	57·0	− 1·5	105	0	0	—	−0·99	59	66
	Prawle Point	67	45	63·3	49·3	56·0	+ 0·4	98	0	0	—	?	*	*
9. IRELAND, N.	Malin Head	66	45	61·3	50·3	55·5	+ 2·5	95	0	2	0·16	?	*	*
	Londonderry	70	45	65·0	48·4	56·3	+ 2·1	100	0	2	0·15	−0·74	*	*
	Mullaghmore	69	46	62·9	49·9	53·1	+ 0·9	99	0	1	0·23	−0·88	*	*
	Belmullet	67	47	60·7	51·0	55·6	+ 1·3	95	0	4	0·37	?	*	*
	Markree Castle	67	37	62·3	43·3	52·3	− 2·0	72	0	2	0·29	−0·46	31	35
	Brookeborough	69	39	63·1	45·7	54·0	− 1·1	84	0	1	0·28	?	*	*
	Armagh	65	39	62·2	45·6	53·5	− 1·5	81	0	1	0·19	−0·55	35	40
	Donaghadee	63	49	61·0	51·7	56·1	+ 2·0	99	0	2	0·37	−0·38	*	*
	Edgeworthstown	67	38	62·4	43·4	52·4	− 3·6	73	0	1	0·24	−0·56	*	*
10. IRELAND, S.	Dublin	64	42	61·8	48·6	54·9	− 0·3	90	0	2	0·13	−0·47	44	50
	Parsonstown	69	37	64·1	44·6	53·9	− 2·6	83	0	1	0·15	−0·66	43	49
	Kilkenny	65	36	64·3	44·6	54·0	− 1·9	84	0	1	0·15	−0·60	*	*
	Waterford	66	36	61·0	44·0	53·5	− 2·2	81	0	1	0·03	−0·87	*	*
	Roche's Point	64	45	62·3	50·0	55·9	− 0·3	97	0	1	0·20	−0·80	*	*
	Valencia	65	45	62·1	49·7	55·6	− 1·0	95	0	1	0·66	−0·46	41	46
	Killarney	68	38	62·5	45·2	53·4	− 3·3	80	0	1	0·11	?	*	*
	Foynes	68	42	62·6	45·6	53·7	− 3·0	82	0	1	0·14	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	64	47	63·1	51·6	57·1	− 1·7	106	0	0	—	−0·85	*	*
	Jersey	72	44	67·0	52·4	59·4	− 0·4	122	0	0	—	−0·82	64	73

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked § with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

§ Dew.

(OFFICIAL COPY.)

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 38.] *Second Series.* WEEK ENDING MONDAY, 24TH SEPTEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 152.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	75	38	59·9	46·8	53·1	3 above.	78	+16	0	0	1379	−217	711	+201
	1. SCOTLAND, EAST	71	34	64·2	42·2	52·9	2 above.	76	+ 2	0	0	1634	−424	700	+157
	2. ENGLAND, N.E.	69	37	58·0	44·9	51·1	2 below.	64	−18	0	0	1736	−473	555	+ 73
	3. ENGLAND, EAST	72	44	64·0	50·6	56·9	1 above.	104	+12	0	0	2193	−361	661	+154
	4. MIDLAND COUNTIES	72	38	61·4	46·2	53·4	1 below.	80	−17	0	0	2074	−456	654	+149
	5. ENGLAND, SOUTH	72	44	66·0	50·5	57·9	2 above.	111	+ 8	0	0	2278	−468	577	+204
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	68	33	60·4	44·6	52·1	1 below.	71	− 8	0	0	1824	−336	505	+107
	7. ENGLAND, N.W.	68	34	61·3	46·7	53·7	1 below.	82	− 3	0	0	1946	−360	500	+117
	8. ENGLAND, S.W.	71	32	63·3	48·6	55·6	0 (average).	95	− 3	0	0	2136	−467	487	+254
	9. IRELAND NORTH	71	37	59·1	47·0	52·8	1 below.	76	− 3	0	0	1962	−280	417	+ 67
	10. IRELAND, SOUTH	68	36	61·5	44·2	52·4	3 below.	73	−16	0	0	2239	−286	352	+113
	— CHANNEL ISLANDS	70	52	64·9	55·0	59·7	1 above.	124	+13	0	0	2468	−331	247	+154

	DISTRICTS. (See p. 152.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	2	1	7 less.	170	+10	27·1	−2·5	15	18	1039	+ 4	29	0
	1. SCOTLAND, EAST	1	1	7 less.	148	+10	20·9	−1·4	47	55	1112	− 68	31	− 2
	2. ENGLAND, N.E.	1	1	6 less.	138	+ 5	19·8	+0·4	31	37	946	−137	27	− 4
	3. ENGLAND, EAST	2	2	5 less.	143	+ 8	18·9	+0·6	40	47	1031	−237	29	− 9
	4. MIDLAND COUNTIES	2	3	5 less.	129	− 4	18·6	−2·2	24	28	971	−205	28	− 6
	5. ENGLAND, SOUTH	1	2	6 less.	130	+ 2	19·3	+0·1	43	51	1028	−237	29	− 7
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	0	–	9 less.	139	−10	29·5	−2·5	30	35	1134	− 8	32	0
	7. ENGLAND, N.W.	0	–	9 less.	140	+ 2	20·7	−4·4	40	46	1037	−110	29	− 3
	8. ENGLAND, S.W.	0	less than ½	11 less.	142	− 3	24·3	−5·6	41	49	1233	−136	35	− 4
	9. IRELAND, NORTH	1	less than ½	8 less.	147	−19	26·1	+0·7	20	24	995	− 63	28	− 2
	10. IRELAND, SOUTH	0	–	9 less.	131	−24	25·9	−2·1	32	37	1190	− 21	34	0
	— CHANNEL ISLANDS	1	less than ½	9 less.	155	− 1	20·7	−1·3	57	67	1414	−207	41	− 6

General Remarks.

Weather has continued fine and dry generally in all parts of the Kingdom. Much fog and mist were, however, experienced in various localities, and exceptionally heavy dews prevailed. At the end of the period the conditions were less settled and rain fell at our more southern and the extreme northern stations. In the extreme south some thunder and lightning occurred.

Temperature has been rather above the mean in the "Channel Islands", the south and east of England, and in the north and east of Scotland, but a little below it in most other districts. The highest of the maxima, which were recorded on somewhat irregular dates, ranged from 68° in some of the western districts, to 72° in "England, E.", "England, S.", and the "Midland Counties", and 75° in "Scotland, N." The lowest of the minima, which were also registered at varying times, ranged from 32° in "England, S.W." to 44° in "England, E." and "England, S.", and to 52° in the "Channel Islands". On most days the range of temperature was large, especially over Scotland.

Rainfall has been much less than the mean in all districts. At many stations measurable quantities of dew were collected in the gauge.

Bright sunshine has varied considerably in different localities, but on the whole it has been less prevalent than it was last week. The percentage of the possible amount of duration ranged from 18 to 55 in Scotland, from 24 to 37 in Ireland, and from 28 to 51 in England. In the "Channel Islands" the percentage was 67.

Depressions observed.—During the greater part of this period the distribution of pressure over our Islands continued anticyclonic, and no depressions of importance appeared in our neighbourhood until towards the end of the week, when a shallow disturbance advanced over the south of England and the north of France, and a deep depression passed over the northern parts of Scandinavia.

A 55781. 350.—9/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

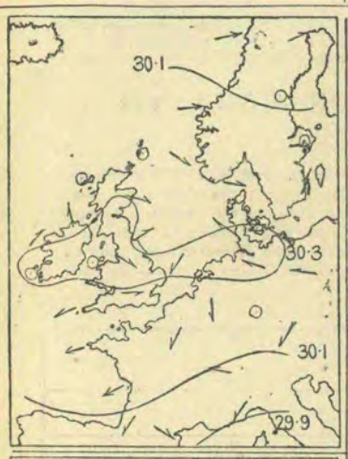
Weather

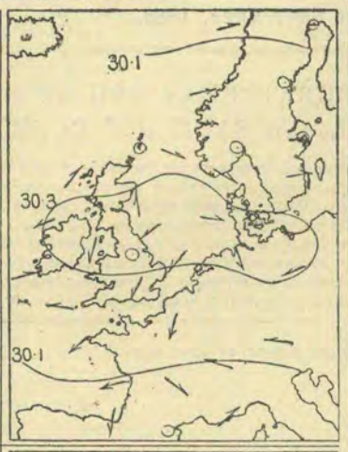
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, September 18.

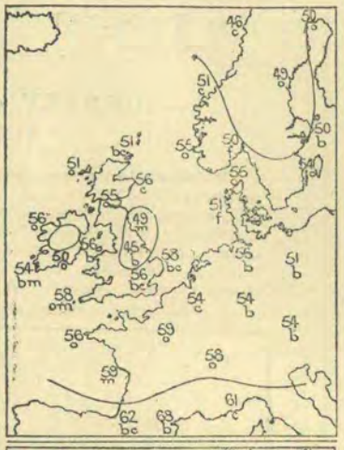
Weather fair generally, but misty or foggy in many places, and showery at Nairn. Slight rain falling later in the extreme north of Scotland.

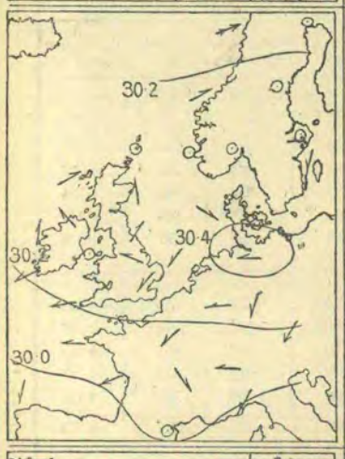
Temperature risen a little in England and Ireland and also in Sweden, but fallen elsewhere. Highest maxima 67° at Parsonstown and Hurst Castle and 66° at Leith.

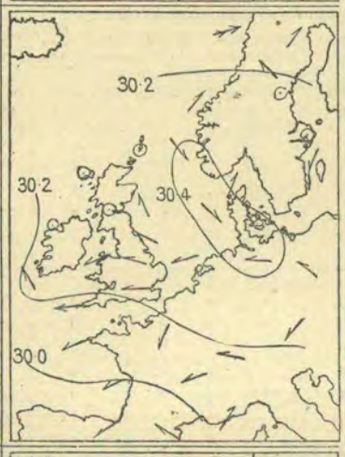
Wind light to fresh from North-East or East over France, Germany, the Netherlands, and the south of England, but Westerly in Scandinavia and calm or variable over the northern parts of our Islands.

Sea moderate to smooth.

Barometer rising at all but the Swedish stations. Long anticyclonic band extending from the south of Denmark to the west of Ireland, with areas of relatively low pressure over the north of Scandinavia and the Gulf of Genoa. Slight fall taking place later at our southern and the French stations.







Wednesday, September 19.

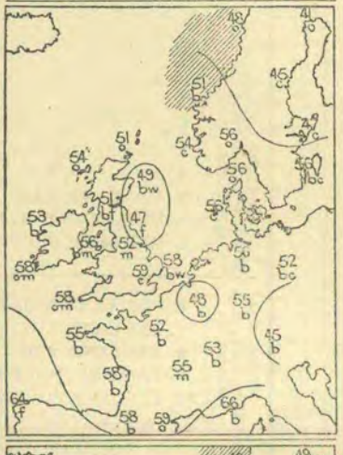
Weather fair generally, but foggy over the more central parts of our Islands and misty in many other localities. Fog dispersing later.

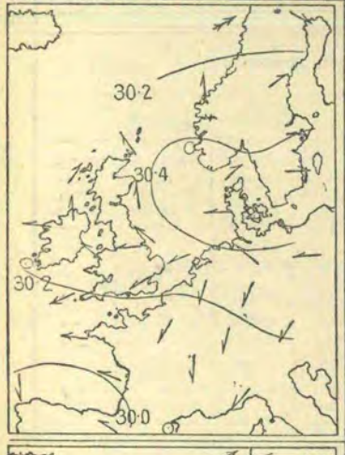
Temperature fallen a little in Sweden, the Netherlands, and France, but changed irregularly elsewhere. Maximum readings a little above 65° over central England.

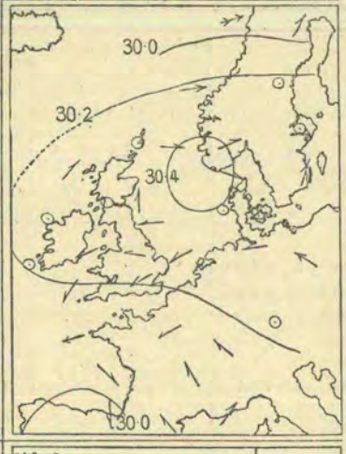
Wind moderate from North-East or East over France, Germany, the Netherlands, and the south of our Islands, and light from South-West in the extreme north, but calm or variable airs reported in the more central districts.

Sea rather rough off the west of Norway, but moderate to smooth elsewhere.

Barometer rising at all but our extreme southern and south-western stations. Large anticyclone covering the North Sea, Denmark, the south of Scandinavia, North Germany, and the greater part of our Islands, with relatively low pressures over Spain and the north of Scandinavia. Slight fall taking place generally later.







Thursday, September 20.

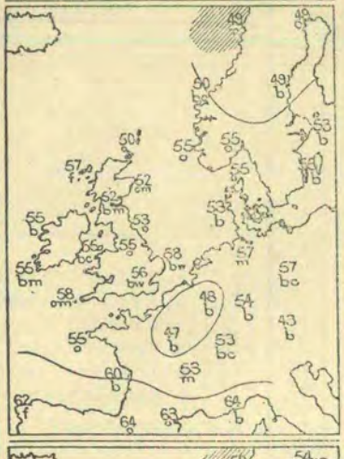
Weather fine generally, but foggy over the north of Scotland and the northern and central parts of Ireland. Fog dispersing later.

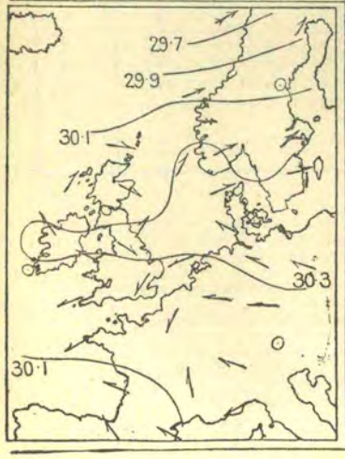
Temperature changed little and irregularly. Rising during day to 69° at York, London, and Oxford, 72° at Loughborough and Bantry, and 75° at Lairg.

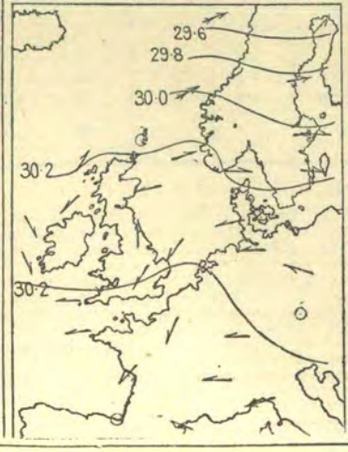
Wind light from South-West in the extreme north of our Island, but moderate from East or North-East at all our more southern as well as at many of the Continental stations. Fresh South-Westerly gale reported in north of Norway.

Sea moderate to smooth generally, but rather rough at Bodö.

Barometer falling a little in the northern parts of Scotland and Scandinavia, but rising elsewhere. Anticyclone lying over Denmark, the south of Scandinavia, and the adjacent portions of the Baltic and North Sea, and large shallow area of low pressure over the southern part of the Bay of Biscay and the north of Spain.







Friday, September 21.

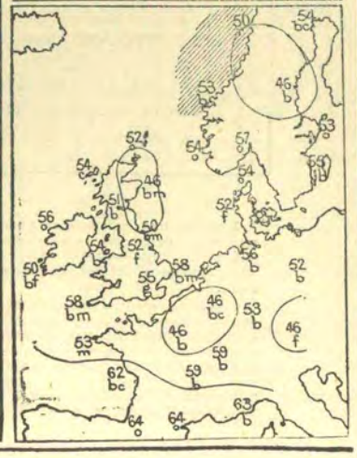
Weather fair generally, but foggy over the northern parts of England and Ireland, and misty in many other localities.

Temperature changed very irregularly, and varying greatly in different districts. Maximum readings above 65° over the eastern and central parts of Great Britain; thermometer in London reaching 70° and at Ochtertyre 72°.

Wind Westerly or South-Westerly in Scandinavia and the north of Scotland, with gales in the west of Norway, but light from East or North-East over Germany, the Netherlands, France, and the south of our Islands.

Sea rough off the west of Norway, but slight or smooth elsewhere.

Barometer rising a little in France and the west and south of our Islands, but falling elsewhere, quickly in Scandinavia. Long band of high pressure extending from the Baltic to the north of Ireland, with a large and rather deep depression over the north of Norway. Slight fall taking place in south later.



SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.

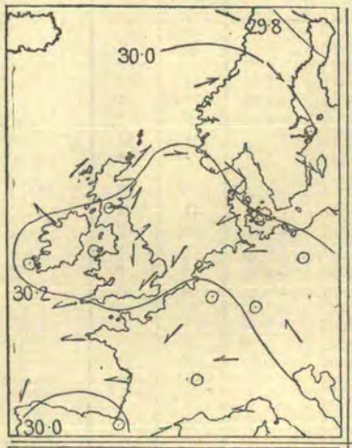
Weather

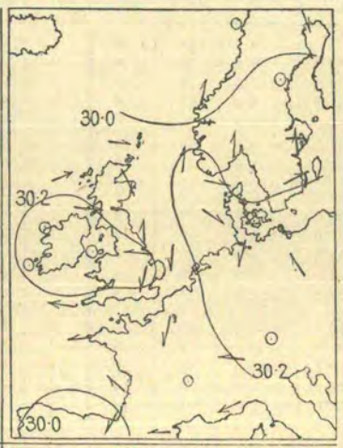
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Saturday, September 22.

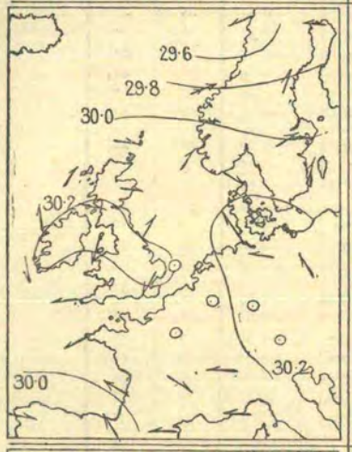
Weather fair generally, but foggy over Ireland and the north of England, and rainy at Skudesnaes and Sumburgh Head. Thunderstorms occurring during the day in the south of France.

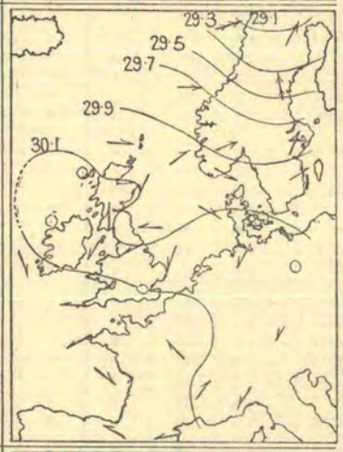
Temperature changed little and irregularly. Maximum readings above 65° in the north and east of Scotland and the south of England, highest of all being 70° at Jersey and 71° at Braemar, Ochtertyre, and Marchmont.

Wind light from South-West in the north of our Islands, and moderate to strong from West or North-West in Scandinavia, but Easterly or North-Easterly over France, the Netherlands, and the south of England.

Sea slight or smooth generally, but rather rough at Christiansund.

Barometer falling in Scotland, and also on the eastern shores of the North Sea, but rising elsewhere. Broad anticyclonic band extending from Central Europe across the North Sea, England, and Ireland, with a depression over the north of Sweden. Barometer falling generally, and new disturbance appearing off the west of Norway.





Sunday, September 23.

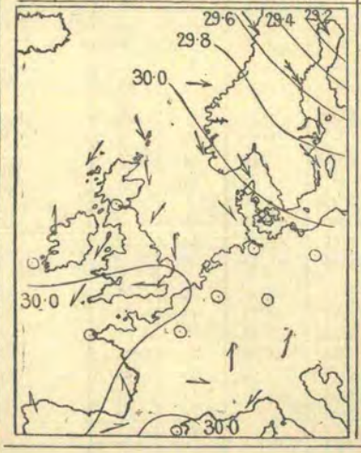
Weather foggy or misty over the greater part of England and Ireland, and rainy at Christiansund and Sumburgh Head, but fair or fine elsewhere.

Temperature changed somewhat irregularly, but risen a little in most places. Maximum readings above 65° in the north of Scotland and the central and southern parts of England.

Wind light from South-West or West over Scotland and the greater part of Scandinavia, but strong to a gale at Christiansund. Moderate from East in the west and south of France, and light from North-East in the south of England.

Sea slight or smooth generally, but rather rough at Christiansund.

Barometer falling generally; most in the west of Norway. Areas of high pressure lying respectively over Germany and over the northern parts of Ireland and England, with a well-defined depression off the north-west of Norway. Deep disturbance appearing later over the extreme north of Scandinavia, and small shallow systems over the Bay of Biscay and west of France.



Monday, September 24.

Weather rainy in the north of Scotland, and foggy over England and Ireland, but fair or fine elsewhere. Rain falling later in many parts of Great Britain, with thunderstorms in the extreme south of England.

Temperature risen a little over England, Germany, and the west and north of France, but fallen elsewhere. Maximum readings over Scotland from 10° to 18° lower than in previous day.

Wind strong to a gale from the North-Westward in Scandinavia, but light from North-East over the greater part of our Islands, and moderate from South or South-West in the west of France.

Sea smooth generally, but high off the west of Norway.

Barometer falling at all but the extreme northern stations. Areas of high pressure lying respectively off the north of Scotland and over South Germany, with a deep depression over Finland and a shallow disturbance of irregular form over the Bay of Biscay and Channel.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 149 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	57	38	54·3	45·9	49·9	− 0·4	55	0	4	0·32	−0·53	*	*
	Stornoway	61	43	57·6	48·1	52·6	+ 2·6	74	0	3	0·14	−0·85	12	14
	Wick	68	39	61·9	47·3	54·4	+ 3·6	87	0	1	0·01	−0·62	*	*
	Lairg ✠	75	38	64·6	45·6	54·6	+ 4·9	88	0	3	0·09	−0·72	*	*
	Glencarron ✠	69	43	59·6	47·6	53·3	+ 3·2	79	0	2	0·24†	?	18	21
	Fort Augustus ✠	66	42	61·5	46·2	53·5	+ 1·4	81	0	0	0·01†§	?	*	*
1. SCOTLAND, E.	Nairn	68	38	63·7	45·1	54·0	+ 2·4	84	0	2	0·13	−0·50	*	*
	Aberdeen	66	39	59·7	44·3	52·6	+ 0·9	74	0	1	0·07	−0·67	41	48
	Braemar ✠	71	34	66·8	37·7	51·6	+ 3·0	85	12	1	0·03	−0·88	53‡	62‡
	Ochtertyre ✠	73	37	68·6	41·9	54·6	+ 2·8	89	0	0	—	−0·94	*	*
	Leith	68	39	62·0	43·0	52·0	− 0·7	70	0	1	0·01	−0·67	*	*
	Marchmont ✠	71	38	64·3	41·4	52·3	+ 1·8	75	2	1	0·08	−0·76	46	55
2. ENGLAND, N.E.	Alnwick Castle	60	38	56·1	42·1	48·8	− 3·5	48	0	1	0·06	−0·64	*	*
	Durham	65	37	59·7	40·8	49·8	− 3·6	60	3	1	0·11	−0·49	39	46
	Shields	60	41	57·4	43·0	49·9	− 2·8	55	0	1	0·03	−0·57	*	*
	Scarborough ✠	59	44	56·6	47·5	51·8	− 2·2	69	0	1	0·05	−0·65	23‡	27‡
	York	69	41	59·7	44·9	51·9	− 2·2	69	0	1	0·02	−0·67	?	?
	Spurn Head	60	48	58·4	51·1	54·6	0·0	88	0	2	0·38	?	*	*
3. ENGLAND, E.	Hillington ✠	67	44	63·0	49·5	55·9	+ 1·8	97	0	1	0·30	−0·41	35	41
	Yarmouth	62	51	61·3	54·7	57·6	+ 1·8	109	0	2	0·28	−0·44	*	*
	Geldeston	69	50	63·7	51·8	57·5	+ 1·8	109	0	1	0·39	−0·26	51	60
	Cambridge	69	47	66·9	48·7	57·4	+ 0·8	108	0	2	0·09	−0·49	36	42
	Rothamsted	67	47	62·7	48·7	55·4	− 0·2	94	0	2	0·09	−0·61	*	*
	Ingatestone	72	48	66·1	50·2	57·8	+ 1·7	111	0	2	0·03	−0·57	39‡	46‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	72	38	59·9	44·9	52·0	− 2·6	70	0	2	0·42	−0·23	19‡	22‡
	Loughborough	72	44	64·7	48·3	56·1	+ 1·5	99	0	2	0·34	−0·37	*	*
	Cheadle ✠	65	41	59·4	47·4	53·1	− 0·3	78	0	1	0·30	−0·54	*	*
	Churchstoke ✠	64	39	59·1	44·0	51·2	− 2·9	64	0	0	—	−0·73	22	26
	Hereford ✠	67	38	61·0	43·4	51·8	− 2·8	69	0	0	—	−0·73	*	*
	Cirencester	66	40	61·6	46·4	53·6	− 1·4	81	0	2	0·39	−0·43	25	29
	Oxford	69	46	63·9	49·0	56·1	+ 0·7	99	0	2	0·48	−0·20	28	33
5. ENGLAND, S.	London	70	47	66·1	51·1	58·2	+ 1·5	113	0	2	0·04	−0·56	28‡	33‡
	Strathfield Turgiss ✠	67	44	65·3	46·9	55·7	− 0·1	96	0	2	0·30	−0·37	*	*
	Dungeness	71	45	65·6	51·7	58·3	+ 1·7	114	0	0	—	−0·69	*	*
	Hastings (St. Leonard's)	70	50	67·4	52·8	59·8	+ 3·2	125	0	0	0·02	−0·70	63	74
	Southampton	72	48	68·5	51·1	59·4	+ 3·7	122	0	2	0·20	−0·58	46	54
	Hurst Castle	68	48	66·0	51·3	58·3	+ 1·8	114	0	1	0·43	−0·35	*	*
	Stowell ✠	67	46	63·2	48·3	55·4	− 0·1	94	0	2	0·05	?	35‡	41‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	68	44	62·1	49·6	55·6	+ 2·8	95	0	0	— †	−1·75	*	*
	Glasgow	63	44	60·7	45·9	52·9	+ 0·2	76	0	0	—	−0·98	28	33
	Ardrossan	61	44	58·3	46·3	52·0	− 0·5	70	0	0	—	−0·90	*	*
	Glenlee ✠	68	33	61·5	38·3	49·3	− 3·2	67	10	0	—	?	*	*
	Douglas (Isle of Man)	62	39	59·3	42·8	50·7	− 1·9	61	0	0	—	−0·92	31	36
7. ENGLAND, N.W.	Newton Reigny (Penrith)	68	34	63·1	38·9	50·4	− 1·9	72	9	0	0·02§	−0·79	49	57
	Barrow-in-Furness	65	48	61·1	49·3	54·9	+ 0·6	90	0	0	—	−0·91	*	*
	Stonyhurst	64	41	61·1	46·4	53·4	+ 0·1	80	0	0	0·02§	−1·18	36	42
	Blackpool ✠	66	42	60·8	46·6	53·4	− 1·3	80	0	0	—	−0·94	29	34
	Manchester	66	40	61·5	46·4	53·6	− 0·6	81	0	0	0·01§	−0·93	*	*
	Liverpool Obsy (Bidston)	66	44	61·1	48·4	54·5	− 1·1	88	0	0	—	−0·81	*	*
	Llandudno ✠	65	47	61·4	49·0	54·9	− 1·6	90	0	1	0·01	−0·79	44	52
	Holyhead	64	47	60·6	48·9	54·3	− 1·8	86	0	1	0·02	−0·79	*	*
8. ENGLAND, S.W.	Llandovery	71	32	65·6	45·1	54·9	0·0	90	0	0	—	−1·20	*	*
	Pembroke	64	46	61·3	49·9	55·3	+ 1·5	93	0	0	—	−0·92	43	51
	Arlington (N. Devon)	69	43	65·0	46·9	55·5	+ 0·7	95	0	0	0·02§	−1·23	*	*
	Cullompton ✠	67	40	63·8	46·2	54·6	− 1·6	88	0	0	0·03§	−0·88	36	43
	Falmouth	62	50	60·2	51·2	55·5	− 1·3	95	0	1	0·04	−1·20	36	43
	Plymouth	69	46	65·8	50·3	57·7	+ 0·4	110	0	1	0·03	−0·95	48	57
	Prawle Point	63	49	61·1	50·9	55·8	+ 1·0	97	0	1	0·03	?	*	*
9. IRELAND, N.	Malin Head	63	50	59·0	51·0	54·8	+ 3·0	90	0	1	0·01	?	*	*
	Londonderry	71	43	64·2	47·3	55·3	+ 2·5	93	0	0	—	−0·90	*	*
	Mullaghmore	65	44	59·9	48·7	54·0	0·0	84	0	0	—	−1·09	*	*
	Belmullet	65	49	59·6	51·3	55·3	+ 2·0	93	0	2	0·07	?	*	*
	Markree Castle	64	37	59·0	44·4	51·4	− 2·7	66	0	0	0·02§	−0·75	18	21
	Brookeborough	66	38	59·7	43·4	51·2	− 2·6	64	0	0	—	?	*	*
	Armagh	64	37	57·4	43·1	49·9	− 3·8	55	0	0	0·02§	−0·72	22	26
	Donaghadee	61	46	57·1	49·1	52·9	0·0	76	0	0	—	−0·75	*	*
	Edgeworthstown	64	41	56·1	44·7	50·1	− 4·6	57	0	1	0·03	−0·76	*	*
10. IRELAND, S.	Dublin	62	43	59·0	48·0	53·2	− 0·8	78	6	1	0·01	−0·59	28	33
	Parsonstown	67	37	59·9	40·7	49·8	− 5·4	60	4	0	0·01§	−0·79	23	27
	Kilkenny	65	36	61·3	41·7	51·0	− 3·8	64	1	0	—	−0·75	*	*
	Waterford	68	36	63·4	42·1	52·2	− 2·6	71	0	0	—	−0·92	*	*
	Roche's Point	63	48	61·0	49·4	54·9	− 0·3	90	0	0	—	−1·01	*	*
	Valencia	67	42	63·6	45·0	53·9	− 1·9	83	0	0	—	−1·15	44	51
	Killarney	68	37	63·3	40·9	51·6	− 4·1	72	3	0	—	?	*	*
	Foynes	65	44	60·3	45·6	52·4	− 3·0	73	0	0	—	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	64	52	62·0	53·7	57·7	− 0·2	110	0	0	0·01§	−0·87	*	*
	Jersey	70	55	67·7	56·3	61·7	+ 2·9	138	0	1	0·02	−0·83	57	67

Stations marked ✠ are in connection with the Royal Meteorological Society, and those marked ✠ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

§ Dew.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 39.] *Second Series.* WEEK ENDING MONDAY, 1ST OCTOBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 156.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	62	26	50·4	37·3	43·6	6 below.	31	−24	13	+11	1410	−242	724	+213
	1. SCOTLAND, EAST	58	28	50·7	39·3	44·8	5 below.	31	−34	8	+ 6	1665	−460	708	+164
	2. ENGLAND, N.E.	62	31	53·6	43·1	48·1	4 below.	43	−29	0	− 1	1779	−503	555	+ 73
	3. ENGLAND, EAST	66	32	58·3	44·7	51·2	3 below.	64	−15	0	0	2257	−375	661	+154
	4. MIDLAND COUNTIES	68	28	57·6	42·5	49·7	3 below.	54	−28	0	− 1	2128	−480	654	+148
	5. ENGLAND, SOUTH	66	34	60·5	48·5	54·2	1 below.	85	− 2	0	− 1	2363	−472	577	+204
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	64	30	53·3	42·9	47·9	4 below.	41	−28	0	− 1	1865	−365	595	+107
	7. ENGLAND, N.W.	67	29	55·3	41·6	49·2	4 below.	50	−23	0	0	1996	−387	500	+117
	8. ENGLAND, S.W.	70	30	59·5	48·9	54·0	1 below.	84	− 4	0	0	2220	−470	487	+253
	9. IRELAND, NORTH	65	31	55·7	45·0	50·2	2 below.	57	−12	0	− 1	2019	−294	417	+ 67
	10. IRELAND, SOUTH	69	35	58·3	47·8	52·8	1 below.	76	− 3	0	− 1	2315	−292	352	+113
	— CHANNEL ISLANDS	66	39	61·0	51·8	56·2	1 below.	99	− 2	0	0	2567	−334	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 156.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	3	9	2 less.	173	+ 8	28·0	−2·7	21	26	1060	+ 1	29	0
	1. SCOTLAND, EAST	3	5	2 less.	151	+ 9	21·4	−1·6	9	11	1121	− 88	31	− 2
	2. ENGLAND, N.E.	3	4	2 less.	141	+ 4	20·2	+0·2	13	15	956 *	−154	26	− 5
	3. ENGLAND, EAST	3	2	5 less.	146	+ 7	19·1	+0·1	32	40	1063	−291	30	− 8
	4. MIDLAND COUNTIES	3	2	6 less.	132	− 4	18·8	−2·7	24	30	995	−212	28	− 6
	5. ENGLAND, SOUTH	4	6	2 less.	134	+ 3	19·9	−0·1	25	31	1053	−245	29	− 8
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	4	4	7 less.	143	−11	29·9	−3·1	20	24	1154	− 16	32	0
	7. ENGLAND, N.W.	4	4	5 less.	141	+ 1	21·1	−5·0	28	34	1065	−116	29	− 3
	8. ENGLAND, S.W.	5	7	4 less.	147	− 2	25·0	−6·0	20	24	1253	−146	35	− 4
	9. IRELAND, NORTH	4	6	3 less.	151	−20	26·7	+0·5	16	19	1011	− 71	28	− 2
	10. IRELAND, SOUTH	3	5	4 less.	134	−25	23·4	−2·4	16	20	1206	− 34	33	− 1
	— CHANNEL ISLANDS	7	11	2 more.	162	0	21·8	−1·0	18	22	1432	−237	40	− 6

General Remarks.

Weather was generally fair and dry during the earlier part of the period, but subsequently became unsettled, with occasional falls of rain. At many of our northern stations sleet or snow showers occurred towards the end of the week.

Temperature has been below the mean in all districts. Over Ireland and the south and south-west of England the deficit has been slight, but over Scotland and the northern parts of England a deficit of 4° to 6° is shown. The highest of the maxima were generally recorded on the 27th, when the thermometer rose to between 58° and 64° in Scotland, 65° and 69° in Ireland, and 62° and 70° in England. The lowest of the minima, which were registered on the last day of the period, ranged from 26° in "Scotland, N." and 28° in "Scotland, E." and the "Midland Counties", to 35° in "Ireland, S." and 39° in the "Channel Islands". At all the more central stations sharp ground frost was experienced.

Rainfall has been less than the mean in all districts excepting the "Channel Islands".

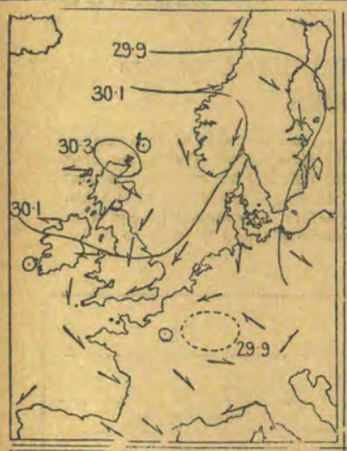
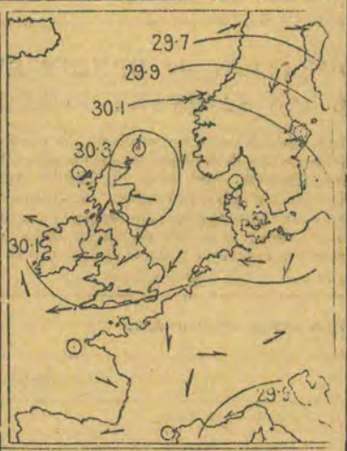
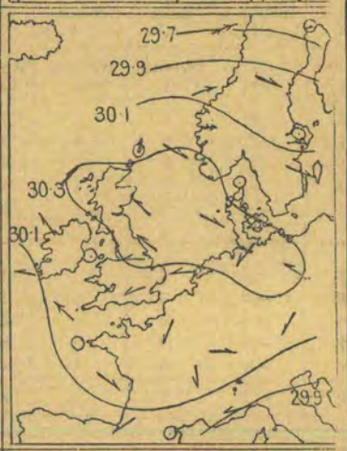
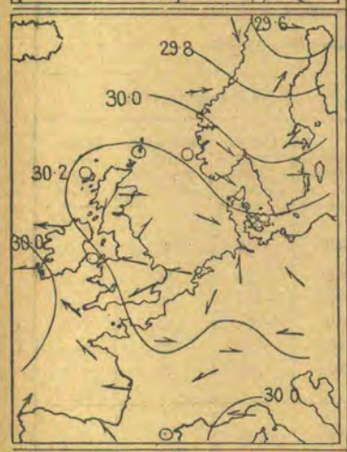
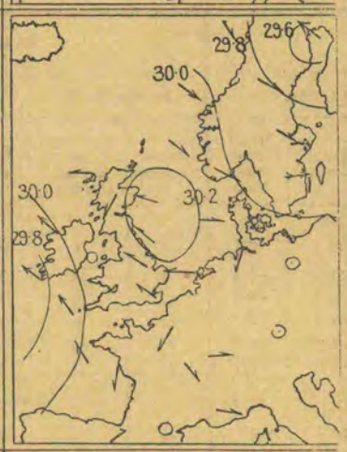
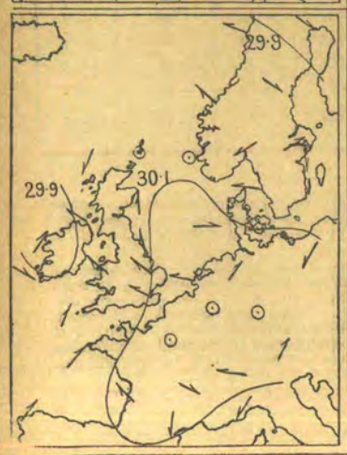
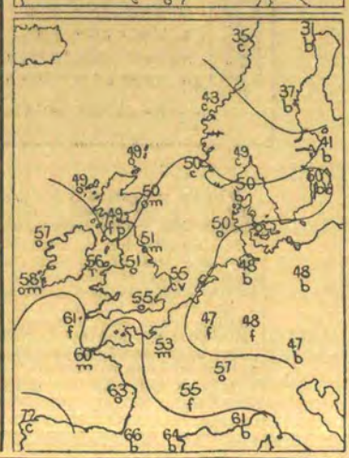
Bright sunshine has been less prevalent than of late, especially in the north-eastern parts of the Kingdom. The percentage of the possible amount of duration ranged from 11 in "Scotland, E." and 15 in "England, N.E." to 30 in the "Midland Counties", to 34 in "England, N.W.", and to 40 in "England, E."

Depressions observed.—During the earlier part of the period the distribution of pressure over our Islands was anticyclonic, but as the week advanced some deep depressions moved south-eastwards over Scandinavia, and several less important disturbances appeared in various parts of our Islands. Under these conditions the wind, which had been light or moderate from the Eastward, gradually veered to South-East and South, and finally to the North-Westward or Northward. It increased considerably in force towards the end of the period, and at some of our western and northern stations blew a moderate to fresh gale.

* This value has been altered owing to the receipt of some arrears of information.

A 55857. 350.—10/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather during the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, September 25.** *Weather* fine in Scandinavia, Denmark, the north of Scotland, and the south of France, but cloudy or overcast elsewhere, with rain over the central parts of England. Rain falling later in the south of England. *Temperature* risen a little in Germany and the south of France, but fallen elsewhere. Daily maxima below 60° at all but our extreme southern stations, and below 55° in many of the central and northern districts. *Wind* South-Westerly in the west of Norway and variable in the south of France, but chiefly North-Easterly elsewhere; fresh or strong in force over the North Sea and adjacent coasts. Subsequently veering to South-East at some of our western stations. *Sea* rough off the east of England and also at Christiansund, but moderate to smooth elsewhere. *Barometer* rising generally. Anticyclone lying off the north of Scotland, but depression lying over the Baltic, and new disturbance appearing off the north-west of Norway. Fall taking place later in north of Scandinavia.	
		**Wednesday, September 26.** *Weather* cloudy over the greater part of Ireland, England, and the north of France, and rainy at Christiansund, but fair or fine elsewhere. Sky clearing later in many parts of Great Britain. *Temperature* risen in Scandinavia and the south-west of our Islands, but fallen elsewhere. Frost experienced over central Scotland in early morning, but daily maxima over England and Ireland a little higher than on previous day. *Wind* strong Westerly or North-Westerly in Scandinavia, but Easterly over England, France, and Germany, and strong South-Easterly on our extreme west and south-west coasts. *Sea* rather rough on our south-west coasts and also at Christiansund, but moderate to smooth elsewhere. *Barometer* rising generally. Large anticyclone lying over the North Sea, North Germany, and the north and east of our Islands, with depression moving eastwards across Finland. Slight fall taking place on our northern coasts.	
		**Thursday, September 27.** *Weather* dull in the northern parts of Scandinavia and Scotland as well as on our extreme south-west coasts, but fair or fine elsewhere. Rain falling later at several of our south-western stations. *Temperature* fallen a little in Germany and the east of France, but risen in most other localities. Daily maxima exceeding 65° at some of our central stations. *Wind* strong from South-East on our south-west coasts, and strong from between South-West and North-West over the north of Scandinavia, but moderate from East over France, Germany, and the east of England. *Sea* rather rough at Christiansund, Valencia, and Scilly, but moderate to smooth elsewhere. *Barometer* falling at all but the French stations. Area of high pressure extending from Germany to the north and east of our Islands, with a depression over the north of Scandinavia and another to the south-westward of Ireland. Rise taking place later in the north of Scandinavia.	
		**Friday, September 28.** *Weather* fine in Sweden, Denmark, and Germany, but cloudy or overcast elsewhere, with fog in the south-west of England, and rain on our north-west coasts. Rain extending later to all parts of our Islands. *Temperature* fallen in Scandinavia and South Germany, but risen elsewhere. Maximum readings over our midland counties several degrees lower than on previous day. *Wind* light North-Westerly in Sweden, Westerly in the South of Ireland, and variable over Germany, the Netherlands, and the east of France, but South-Easterly elsewhere. Subsequently veering to South-West at most of our western stations. *Sea* moderate to smooth generally. *Barometer* falling at all but the Scandinavian stations. Large anticyclone lying over Germany, the Netherlands, France, and the southern parts of the North Sea, with a V-shaped depression over Ireland. Depression subsequently moving north-eastwards, and barometer falling in Norway.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

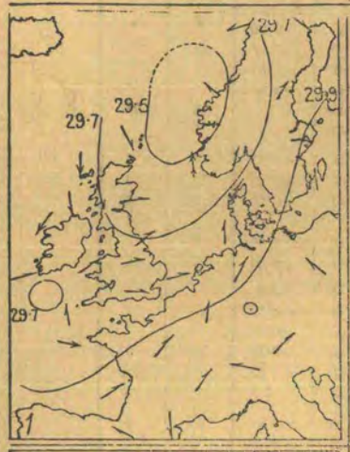
Weather

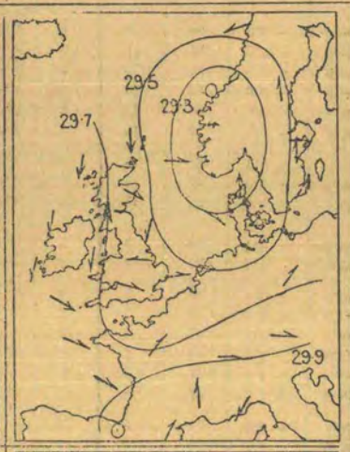
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Saturday, September 29.

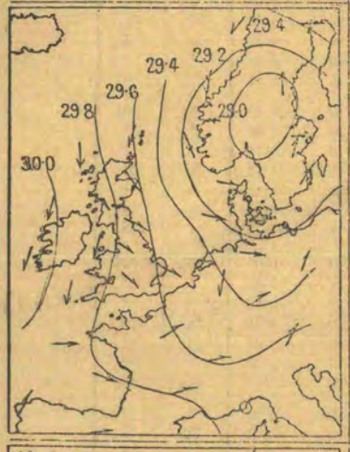
Weather cloudy generally, with fog and rain in many parts of our Islands, but fine in the south of France. Some improvement taking place in south of England later, but heavy showers falling there at night.

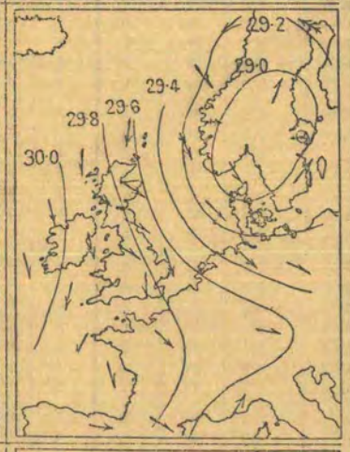
Temperature risen at all but our western and extreme northern stations. Maximum readings a little above 65° in some of the central parts of England, but below 50° in the north of Scotland.

Wind Northerly in Scotland and the north of Ireland, but South-Westerly over England and France, and Southerly on the eastern shores of the North Sea; light or moderate in force generally.

Sea rather rough off the north-west of France and also at Skudesnaes, but moderate to smooth elsewhere.

Barometer falling generally. Pressure highest over the southern parts of France and Germany, with a large depression off the west of Norway and a secondary disturbance off our own south-west coasts. Both disturbances subsequently moving eastwards and barometer rising in west.





Sunday, September 30.

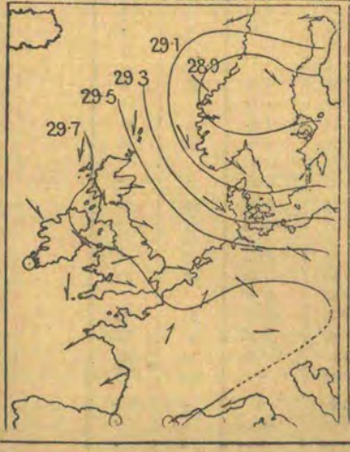
Weather fair over the greater part of our Islands, but rain falling at several of the Continental stations, and snow reported at Haparanda. Snow or hail showers falling later over the northern parts of the United Kingdom.

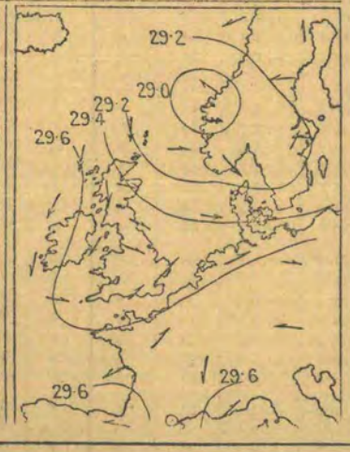
Temperature risen in Sweden, Germany, and the south of France, but fallen quickly elsewhere. Maximum readings below 55° at all but our south-western stations and below 50° in the north of Scotland.

Wind South-Westerly in Germany and the south of Sweden, and Westerly in Denmark, but North-Westerly or Northerly elsewhere; fresh or strong in force in most places.

Sea rough on several of the more exposed parts of our coasts.

Barometer rising in our Islands, but falling at the Continental stations, quickly in Sweden. Pressure highest to the westward of Ireland, with a large and deep depression over Scandinavia. Slight fall taking place later on our extreme north-west coasts.





Monday, October 1.

Weather fine in Germany and the south of England, but cloudy elsewhere, with rain in Norway and hail or sleet over the northern parts of our Islands.

Temperature fallen generally. Ground frost occurring over Great Britain in early morning, and maximum readings below 50° at most of our western, northern, and eastern stations.

Wind Northerly in the north of Scotland, and North-Westerly in most other parts of north-western Europe, but Easterly in the west of France; strong in force at some of our northern stations.

Sea rather rough on our north-west, north, and east coasts.

Barometer falling generally. Band of high pressure extending from the Bay of Biscay and the south of Ireland to South Germany, with a large and deep depression over Scandinavia, and a shallow secondary disturbance over the Irish Sea. Northern depression subsequently moving slowly westwards.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending Sept. 24	York	—	—	—	—	—	—	—	—	—	—	—	23	27

III.—DATA from which the SUMMARY on page 153 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	56	33	49·1	39·3	44·0	− 5·3	25	8	4	0·83	−0·08	*	*
	Stornoway	57	33	50·6	36·1	43·0	− 5·9	32	17	3	0·89	−0·15	24	30
	Wick	57	34	51·1	40·6	45·6	− 3·9	31	4	4	0·61	−0·04	*	*
	Lairg ℳ	62	26	51·1	34·9	42·6	− 6·0	34	20	3	0·44	−0·46	*	*
	Glencarron ℳ	56	31	50·0	36·8	43·1	− 5·8	30	15	4	2·00†	?	18	22
	Fort Augustus ℳ	56	27	50·6	36·3	43·1	− 7·7	32	16	3	0·45†	?	*	*
1. SCOTLAND, E.	Nairn	58	28	52·0	37·1	44·2	− 6·1	36	14	3	0·41	−0·21	*	*
	Aberdeen	54	34	50·1	41·0	45·3	− 5·0	27	3	5	1·01	+0·29	16	20
	Braemar ℳ	52	31	48·7	36·7	42·4	− 4·8	25	15	4	0·67	−0·25	2‡	2‡
	Ochtertyre ℳ												*	*
	Leith	54	36	52·0	42·3	46·9	− 4·4	34	0	1	0·10	−0·45	*	*
	Marchmont ℳ	58	32	50·9	39·6	45·0	− 4·1	31	7	2	0·17	−0·63	9	11
2. ENGLAND, N.E.	Alnwick Castle	55	31	51·1	40·3	45·4	− 5·4	31	5	2	0·45	−0·25	*	*
	Durham	61	31	53·6	40·3	46·6	− 5·3	39	5	2	0·22	−0·39	15	18
	Shields	58	33	53·4	43·1	48·0	− 3·3	42	0	3	0·43	−0·16		*
	Scarborough ℳ	59	35	52 8	44·4	48·6	− 4·1	46	0	4	0·83	+0·12	6‡	7‡
	York	62	32	55·0	42·4	48·4	− 4·2	45	0	3	0·36	−0·31	17?	20?
	Spurn Head	59	38	55·6	47·9	51·6	− 1·3	67	0	3	0·31	?	*	*
3. ENGLAND, E.	Hillington ℳ	62	32	53·1	42·1	49·7	− 2·9	54	0	3	0·23	−0·43	30	38
	Yarmouth	62	34	57·4	48·9	53·0	− 1·4	77	0	3	0·22	−0·48	*	*
	Geldeston	63	32	58·3	43·3	50·4	− 4·0	59	0	3	0·22	−0·43	32	39
	Cambridge	64	34	59·9	43·6	51·4	− 3·5	66	0	2	0·06	−0·52	35	43
	Rothamsted	64	34	58·1	43·8	50 6	− 3·6	60	0	4	0·16	−0·54	*	*
	Ingatestone	64	35	58·0	46·2	51·8	− 2·7	69	0	2	0·17	−0·46	31‡	38‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	62	28	56·0	33·6	47·0	− 6·2	49	10	3	0·32	−0·33	16‡	20‡
	Loughborough	67	34	58·9	41·3	49·7	− 3·3	57	2	2	0·04	−0·66	*	*
	Cheadle ℳ	61	33	55·0	41·1	47·7	− 4·0	44	3	3	0·13	−0·72	*	*
	Churchstoke ℳ	65	33	56·7	42·1	49·1	− 3·5	59	0	1	0·02	−0·73	24	30
	Hereford ℳ	68	36	59·6	44·6	51·7	− 1·4	68	0	3	0·28	−0·42	*	*
	Cirencester	62	35	58·7	44·7	51·4	− 2·2	66	0	5	0·20	−0·59	26	32
	Oxford	65	36	58·6	45·3	51·6	− 2·2	67	0	5	0·23	−0·42	31	39
5. ENGLAND, S.	London	66	35	60·9	47·7	54·0	− 1·3	84	0	4	0·53	−0·05	27‡	33‡
	Strathfield Turgiss ℳ	66	34	62·4	44·2	52·9	− 1·6	76	0	4	0·67	+0·02	*	*
	Dungeness	63	35	59·6	51·7	55·5	+ 0·4	95	0	4	0·79	+0·09	*	*
	Hastings (St. Leonard's)	63	37	59·6	50·0	54·6	− 0·7	88	0	3	0·60	−0·16	24	30
	Southampton	66	41	61·5	48·2	54·5	− 0·1	88	0	5	0·34	−0·43	26	32
	Hurst Castle	64	43	61·0	50·0	55·2	0·0	92	0	4	0 67	−0·10	*	*
	Stowell ℳ	63	40	58·2	47·5	52·6	− 1·5	74	0	4	0·32	?	24‡	29‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	64	36	53·4	40·0	46·4	− 5·2	39	6	5	0·69†	−1·06	*	*
	Glasgow	57	36	51·5	43·0	47·1	− 4·2	36	0	4	0·16	−0·81	14	17
	Ardrossan	61	39	54·7	43·9	49·0	− 2·3	49	0	3	0·07	−0·86	*	*
	Glenlee ℳ	59	30	52·8	42·5	47·4	− 4·4	38	0	3	0·48	?	*	*
	Douglas (Isle of Man)	58	33	54·1	45·2	49·5	− 2·3	53	0	4	0·47	−0·43	25	31
7. ENGLAND, N.W.	Newton Reigny (Penrith)	59	29	52·8	34·8	43·4	− 7·3	40	20	4	0·26	−0·55	32	40
	Barrow-in-Furness	60	39	54·3	44·7	49·3	− 3·8	51	0	4	0·74	−0·18	*	*
	Stonyhurst	59	33	52·7	41·9	47·0	− 4·7	35	0	5	0·56	−0·65	28	35
	Blackpool ℳ	63	38	55·9	41·3	49·8	− 3·5	55	0	2	0·16	−0·80	29	36
	Manchester	62	31	55·4	41·7	48·2	− 4·4	45	1	4	0·59	−0·40	*	*
	Liverpool Obsy (Bidston)	61	40	55·9	45·9	50·7	− 3·6	61	0	5	0·33	−0·40	*	*
	Llandudno ℳ	67	38	58·6	45·8	51·9	− 3·3	69	0	5	0·26	−0·57	21	26
	Holyhead	62	45	56·4	49·7	52·9	− 2·1	76	0	4	0·46	−0·43	*	*
8. ENGLAND, S.W.	Llandovery	70	30	61·6	43 1	51·9	− 1·8	69	0	4	1·01	−0·21	*	*
	Pembroke	60	44	57·0	50·7	53·7	+ 0·1	82	0	5	0·69	−0·24	21	26
	Arlington (N. Devon)	66	42	58·7	48·7	53·5	− 0·1	81	0	5	0·83	−0·46	*	*
	Cullompton ℳ	69	40	61·2	47·4	54·0	− 0·7	84	0	4	0·53	−0·37	23	28
	Falmouth	65	43	59·1	52·0	55·4	− 0·4	94	0	6	1·00	−0·25	18	22
	Plymouth	64	43	60·0	51·8	55·7	− 0·1	96	0	5	0·57	−0·35	17	21
	Prawle Point	63	40	59·1	48·6	53·6	− 0·2	81	0	5	0·55	?	*	*
9. IRELAND, N.	Malin Head	59	41	53·0	47·0	49·9	− 0·9	55	0	5	0·50	?	*	*
	Londonderry	65	37	58·7	43·6	50·8	− 0·8	62	0	5	0·60	−0·32	*	*
	Mullaghmore	60	42	55 6	48·3	51·8	− 0·7	69	0	5	0·76	−0·25	*	*
	Belmullet	61	44	56·4	50·0	53·1	+ 0·5	78	0	4	1·03	?	*	*
	Markree Castle	64	34	53·1	41·3	49·5	− 2·6	55	0	5	1·05	+0·25	11	13
	Brookeborough	59	31	54·7	40·7	47·4	− 4·7	43	4	5	0·36	?	*	*
	Armagh	61	32	55·8	39·9	47·5	− 4·8	47	6	4	0·21	−0·50	20	25
	Donaghadee	65	41	56·1	49·0	52·4	+ 0·5	73	0	4	0·27	−0·48	*	*
	Edgeworthstown	61	34	55·3	42·6	48·7	− 4·1	47	0	3	0·45	−0·32	*	*
10. IRELAND, S.	Dublin	63	38	56·4	46·5	51·2	− 1·6	64	0	3	0·41	−0·21	23	29
	Parsonstown	62	37	57·0	46·6	51·5	− 1·8	67	0	3	0·28	−0·50	8	10
	Kilkenny	65	38	58·3	47·1	52·4	− 1·1	73	0	2	0·35	−0·38	*	*
	Waterford	59	39	60·4	48·0	53·9	+ 0·2	83	0	2	0·72	−0·20	*	*
	Roche's Point	64	42	58·4	49·6	53·8	+ 0·5	83	0	3	0·93	−0·07	*	*
	Valencia	63	41	59·7	49·3	54·3	− 0·7	86	0	4	0·42	−0·77	17	21
	Killarney	65	35	58·7	47·0	52·6	− 1·9	74	0	5	0·34	?	*	*
	Foynes	60	42	57·8	48·4	52·9	− 1·0	76	0	3	0·40	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	64	44	59·6	51·6	55·4	− 1·6	94	0	7	1·38	+0·50	*	*
	Jersey	66	39	62·3	52·0	56·9	− 0·8	104	0	6	0·79	−0·10	18	22

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bennin Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 40.] *Second Series.* WEEK ENDING MONDAY, 8TH OCTOBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 160.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated, For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	57	29	47·4	35·1	41·1	7 below.	15	−31	27	+25	1425	−275	751	+239
	1. SCOTLAND, EAST	61	29	49·2	35·2	42·0	6 below.	20	−35	19	+17	1685	−498	727	+182
	2. ENGLAND, N.E.	55	26	49·2	34·3	41·5	9 below.	20	−40	30	+28	1799	−543	585	+103
	3. ENGLAND, EAST	56	26	50·1	32 2	40 9	12 below.	23	−42	38	+38	2280	−416	699	+191
	4. MIDLAND COUNTIES	56	25	50·1	31·7	40·6	11 below.	23	−49	40	+39	2151	−519	694	+186
	5. ENGLAND, SOUTH	57	27	51·6	33·3	42·3	11 below.	39	−38	24	+23	2402	−509	601	+227
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	58	26	50·4	36·8	43·4	7 below.	32	−28	15	+14	1837	−393	520	+122
	7. ENGLAND, N.W.	56	25	49·5	36·7	42·9	9 below.	29	−33	15	+15	2025	−422	515	+132
	8. ENGLAND, S.W.	57	25	52·6	37·4	44·8	9 below.	39	−37	13	+13	2239	−509	530	+266
	9. IRELAND, NORTH	58	29	51·0	33·8	44·7	6 below.	32	−27	9	+ 8	2050 *	−324	426	+ 76
	10. IRELAND, SOUTH	58	27	52·5	38·2	45·1	7 below.	38	−31	11	+10	2353	−327	363	+124
	— CHANNEL ISLANDS	57	38	54·1	44·5	49·2	7 below.	50	−42	0	0	2617	−379	247	+154

Rainfall. / Bright Sunshine.

	DISTRICTS. (See p. 160.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	6	14	3 more.	179	+ 9	29·4	−2·4	18	23	1078	− 6	20	0
	1. SCOTLAND, EAST	4	5	3 less.	155	+ 9	21·9	−1·9	20	27	1141	− 94	31	− 2
	2. ENGLAND, N.E.	3	4	2 less.	144	+ 4	20·6	−0·1	32	41	988	−140	27	− 4
	3. ENGLAND, EAST	4	5	2 less.	150	+ 5	19·6	0·0	32	41	1035	−283	30	− 8
	4. MIDLAND COUNTIES	3	2	6 less.	135	− 5	19·0	−3·3	28	37	1023	−207	28	− 5
	5. ENGLAND, SOUTH	4	6	1 less.	138	+ 3	20·5	−0·2	29	37	1082	−238	30	− 5
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	4	4	7 less.	147	−11	30·3	−3·8	29	38	1183	− 12	32	0
	7. ENGLAND, N.W.	5	7	3 less.	149	+ 2	21·8	−5·2	25	32	1090	−111	29	− 4
	8. ENGLAND, S.W.	6	6	5 less.	153	0	25·6	−6·5	32	41	1285	−144	35	− 4
	9. IRELAND, NORTH	6	7	1 less.	157	−18	27·4	+0·3	22	28	1033	− 71	28	− 2
	10. IRELAND, SOUTH	4	3	6 less.	138	−25	25·7	−3·0	23	30	1229	− 37	33	− 2
	— CHANNEL ISLANDS	6	8	1 less.	168	+ 3	22·6	−1·2	29	37	1481	−226	40	− 6

General Remarks.

Weather continued unsettled during the earlier days of the period, with falls of rain over our southern districts, and sleet or snow at our more northern stations. Towards the end of the week, however, the conditions improved, but fog or haze occasionally prevailed in some localities.

Temperature has again been below the mean. Over southern, central, and eastern England the deficit has been as much as 11° or 12°, while in other parts of England it has been 9°, and over Ireland and Scotland 6° or 7°. The highest of the maxima, which were recorded on very irregular dates, ranged from 55° in "England, N.E." to 61° in "Scotland, E." On the first day of the period the maxima over south-eastern England were very low; at Cambridge the thermometer did not rise above 43°, and in London 45°. The absolute minima, which were registered either on the 3rd or 8th in most parts of England, and on various dates over Ireland and Scotland, were very low for the time of year. Over the inland parts of England the thermometer fell to between 25° and 27°, and over Ireland and Scotland to between 26° and 29°. At Ingatestone on the 5th a thermometer on the grass fell to 17°, and the mean of the grass minima for the week was as low as 21°·3.

Rainfall has been rather more than the mean in "Scotland, N.", but less in all other districts.

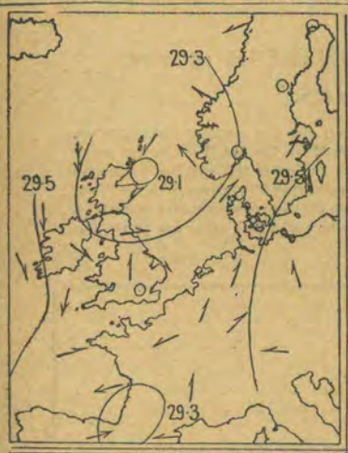
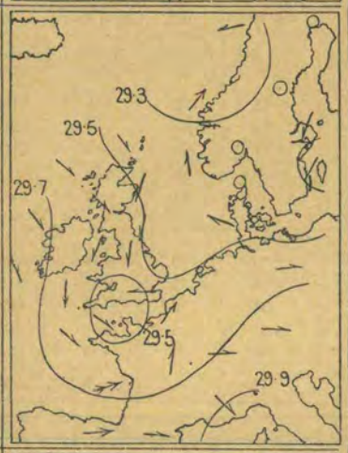
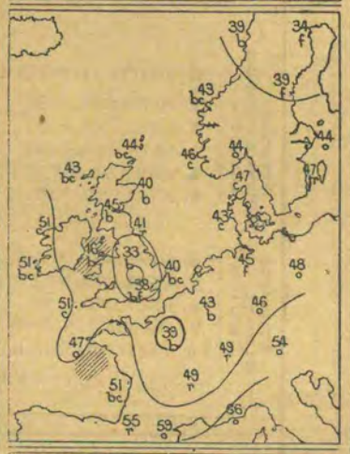
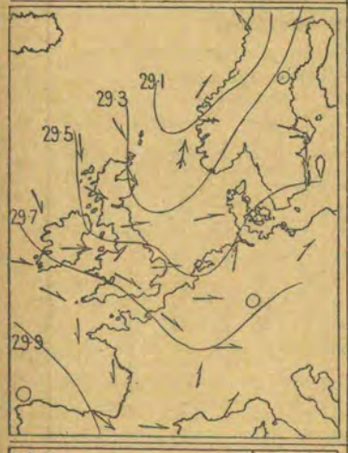
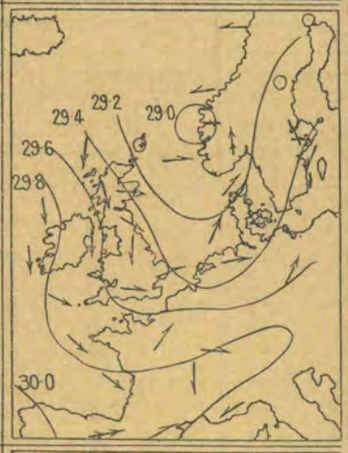
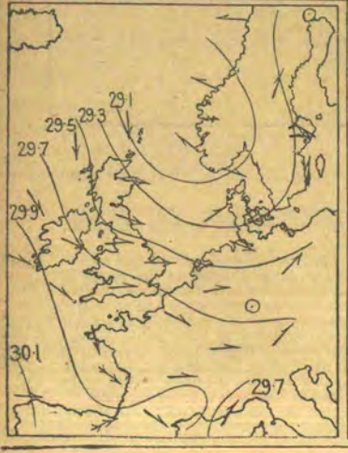
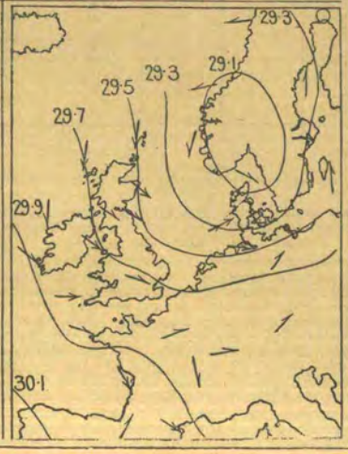
Bright sunshine has been more prevalent than it was last week, the percentage of the possible amount of duration having ranged from 23 in "Scotland, N." to 41 in "England, S.W.", "England, N.E.", and "England, E."

Depressions observed.—During the earlier part of the period a well-defined and rather deep depression travelled in a south-westerly direction from Norway to the north of Scotland and subsequently southwards to the English Channel, where it dispersed during the night of the 3rd—4th. By the evening of the 4th another disturbance had appeared over the west of Norway, and after moving for some distance in a southerly direction, disappeared to the eastward of our area. During the prevalence of this system several subsidiary disturbances passed over our Islands from the northward, but towards the end of the period the distribution of pressure over the United Kingdom was becoming anticyclonic. The Northerly winds experienced over our more northern coasts were generally fresh or strong in force, and at times increased to a moderate to strong gale.

* This value has been altered owing to the receipt of further information.

A 55923. 350.—10/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather during the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, October 2.** *Weather* fine in many parts of Scandinavia and Denmark, but cloudy or overcast elsewhere, with fog over central England and rain at several of our western and northern stations. Rain falling later in most parts of the United Kingdom. *Temperature* risen a little in Scotland and France, but fallen elsewhere. Frost occurring over the inland parts of the United Kingdom in morning. Maximum readings below 50° at all but our north-western and south-western stations. *Wind* strong to a gale from the northward on our extreme western and western coasts, but light Westerly in the east. Strong North-Easterly in the west of France, and South-Easterly on the eastern shores of the North Sea. *Sea* rough in the extreme north and also at Scilly, but moderate to smooth elsewhere. *Barometer* falling at all but the Scandinavian and Danish stations. Well-defined depression lying off the north-east of Scotland, and shallower disturbance over the south of France. Former system subsequently moving southwards, and barometer rising in extreme north.	
		**Wednesday, October 3.** *Weather* fair over the greater part of north-western Europe, but foggy over central England and rainy at some of the French stations. Showers falling later in most places, with thunder and lightning in the south-west of England at night. *Temperature* changed very irregularly. Sharp frost occurring over the inland parts of England in early morning, but maximum readings somewhat higher than on previous day. *Wind* light Northerly on our northern coasts and fresh from the same quarter in the west, but variable in the south-east of England, Southerly in France, and Easterly in the south of Scandinavia. *Sea* rather rough at Holyhead and Lorient, but moderate to smooth elsewhere. *Barometer* falling in Sweden and Denmark, but rising in most other localities. Depression of previous day now lying over Bristol Channel, but other disturbances noticed respectively off the west of Norway and the north coast of Holland. Norwegian disturbance subsequently becoming deeper, but other systems gradually dispersing.	
		**Thursday, October 4.** *Weather* fair at our southern and most of the Continental stations, but dull and unsettled over the northern parts of the United Kingdom, with snow in the north of Scotland. Sleet or hail falling later in all the more northern districts. *Temperature* fallen several degrees in the north of Scotland and to a less extent in Sweden, Germany, and the south of France, but risen elsewhere. Frost occurring in several parts of Great Britain in the morning. Maxima very low in the north of Scotland. *Wind* strong from the Northward in the north of Scotland, and moderate from North-West or West over Ireland, England, and France, but South-Westerly on the eastern shores of the North Sea. Strong winds or gales from the Northward or North-Westward experienced later in most parts of the United Kingdom. *Sea* rough in the north and north-west. *Barometer* falling at all but our southern and the French stations. Pressure highest over Portugal, with a large depression off the west of Norway. Depression subsequently extending southwards, and barometer falling generally.	
		**Friday, October 5.** *Weather* fine in the south and south-east of England, but cloudy or overcast elsewhere, with hail or sleet showers over the northern parts of the United Kingdom, and rain at several of the Continental stations. Lightning seen in the east of England at night. *Temperature* fallen at all but our extreme northern stations. Sharp frost occurring over Great Britain in early morning, but temperature afterwards rising in north. *Wind* Northerly in the north of Scotland, but North-Westerly or Westerly over Ireland, England, and France, and Southerly or South-Easterly in Scandinavia. Strong in force in many parts of our Islands and France. *Sea* rough on all the more exposed parts of our western, northern, and eastern coasts. *Barometer* rising in France and the south of our Islands, but falling elsewhere. Pressure still highest over Portugal, with a large depression over the south of Norway and the adjacent portions of the North Sea. Depression subsequently moving south-eastwards, and barometer rising on our northern coasts.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.

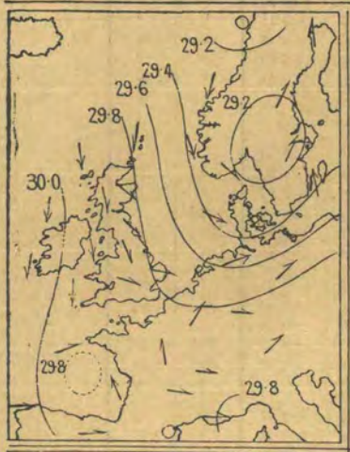
Weather

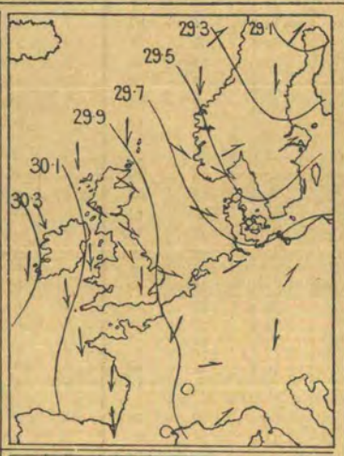
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Saturday, October 6.

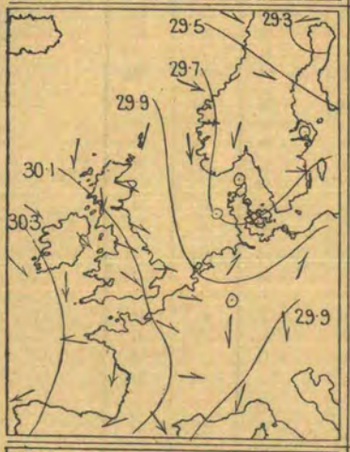
Weather changeable (showers, with bright intervals,) in our Islands, but dull and rainy at most of the Continental stations. Considerable improvement taking place later over the Continent.

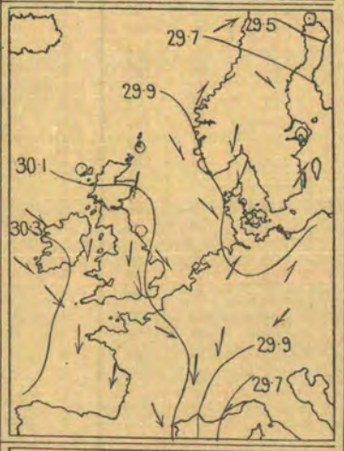
Temperature fallen a little in most places. Frost occurring over Great Britain in early morning, but maximum readings over Scotland a little higher than on previous day.

Wind strong from the Northward on our western and northern coasts, and fresh North-Westerly over the North Sea and our east coasts, but Southerly in Sweden and Easterly in the west of France. Subsequently shifting to the Northward at the French stations.

Sea rough off the north of Scotland and rather rough on exposed parts of our eastern and western coasts.

Barometer rising at all but the Swedish and French stations. Pressure highest to the westward of our Islands, with a large depression over the south of Sweden, and smaller disturbances over the Bay of Biscay and the Gulf of Genoa. Rise taking place generally later.





Sunday, October 7.

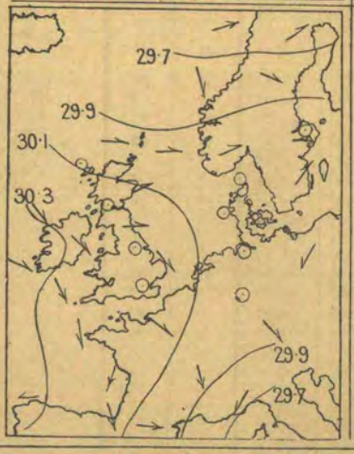
Weather fair over the greater part of our Islands, but rainy over the north of Scandinavia and the Netherlands. Showers falling later in many parts of the United Kingdom.

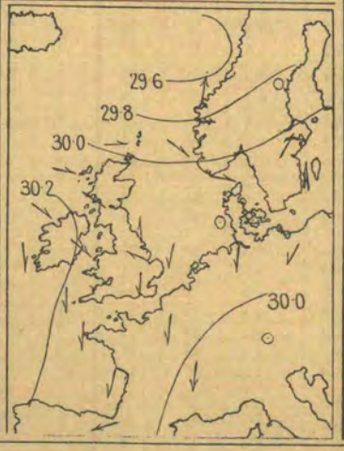
Temperature fallen a little at our extreme southern and many of the Continental stations, but risen slightly elsewhere. Frost again occurring over Central England in morning, and daily maxima remaining low generally.

Wind chiefly Northerly and North-Westerly; light or moderate in force generally, but strong on exposed parts of our own and the French coast.

Sea rough, or rather so, on many parts of our eastern and western coasts.

Barometer rising generally. Pressure highest to the westward and south-westward of our Islands, and lowest in the north of Sweden, but shallow depressions lying respectively over Denmark and the Gulf of Genoa. Slight fall taking place later in west and south-west.





Monday, October 8.

Weather fine at our south-eastern and many of the Continental stations, but dull and unsettled in the west and north. Showers falling later in many parts of the United Kingdom.

Temperature fallen over Germany, the east of France, and central England, but risen elsewhere. Sharp frost occurring at our inland stations in morning, but maximum readings rather higher generally than on previous day.

Wind light Westerly in Scandinavia and the north of Scotland, but North-Westerly or Northerly elsewhere; strong in force at the French stations.

Sea rather rough at some of our south-eastern and south-western stations, but moderate to smooth elsewhere.

Barometer rising at all but the southern French stations. Pressure highest to the westward and south-westward of our Islands, with a depression over the north of Scandinavia, and another over the Gulf of Genoa. New disturbance appearing later off the west of Norway.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; → = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 157 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	52	29	46·6	34·0	40·1	− 8·3	13	30	7	0·85	−0·11	*	*
	Stornoway	56	31	47·9	34·9	41·2	− 6·7	17	28	6	1·54	+0·45	24	31
	Wick	52	32	46·9	36·0	41·3	− 7·0	14	23	7	0·90	+0·25	*	*
	Lairg ℳ	56	29	48·1	33·7	40·7	− 6·8	17	32	7	1·60	+0·66	*	*
	Glencarron ℳ	53	29	46·3	36·2	41·1	− 6·7	12	22	7	2·71†	?	11	15
	Fort Augustus ℳ	57	32	48·6	35·7	42·0	− 7·5	18	18	4	0·86†	?	*	*
1. SCOTLAND, E.	Nairn	56	32	47·7	35·7	41·5	− 7·6	16	25	5	0·58	−0·02	*	*
	Aberdeen	56	32	47·1	35·9	41·3	− 7·6	14	24	6	0·61	−0·09	25	33
	Braemar ℳ	53	29	44·7	32·9	38·6	− 7·4	8	32	5	0·81	−0·11	5‡	6‡
	Ochtertyre ℳ	61	30	52·4	36·3	44·1	− 4·9	39	16	3	0·21	−0·79	*	*
	Leith	60	33	52·9	37·1	44·8	− 5·0	40	14	3	0·31	−0·20	*	*
	Marchmont ℳ	58	29	50·3	33·1	41·5	− 6·1	23	36	2	0·26	−0·51	31	41
2. ENGLAND, N.E.	Alnwick Castle	52	32	47·1	37·0	41·9	− 7·8	14	20	3	0·43	−0·24	*	*
	Durham	54	27	50·1	32·0	40·8	− 9·5	23	39	2	0·29	−0·34	29	38
	Shields	54	30	50·3	34·4	42·1	− 8·1	33	21	3	0·32	−0·26	*	*
	Scarborough ℳ	51	29	48·1	33·1	40·4	−10·7	17	34	4	0·73	+0·02	34‡	43‡
	York	55	26	51·0	31·0	40·7	−10·7	25	43	3	0·30	−0·35	32	41
	Spurn Head	51	35	43·3	38·4	43·2	− 8·3	24	10	5	0·42	?	*	*
3. ENGLAND, E.	Hillington ℳ	55	28	49·7	32·2	41·2	−10·1	22	34	5	0·47	−0·17	26	33
	Yarmouth	51	31	48·6	34·1	41·1	−11·8	18	31	5	0·93	+0·23	*	*
	Geldeston	55	29	50·9	32·1	41·2	−11·9	25	39	7	0·54	−0·09	32	41
	Cambridge	56	27	51·7	31·0	41·0	−12·3	27	43	2	0·24	−0·32	37	47
	Rothamsted	53	26	49·4	30·3	39·6	−12·9	21	44	2	0·16	−0·54	*	*
	Ingatestone	54	28	50·2	32·4	41·0	−12·0	23	37	2	0·33	−0·31	34‡	44‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	52	25	49·9	30·3	39·8	−11·9	22	44	2	0·11	−0·56	36‡	46‡
	Loughborough	56	27	52·3	31·1	41·4	−10·0	29	43	3	0·11	−0·58	*	*
	Cheadle ℳ	52	28	48·2	31·5	39·6	−10·8	17	39	2	0·37	−0·48	*	*
	Churchstoke ℳ	51	29	49·3	32·6	40·7	−10·6	20	36	4	0·30	−0·48	25	32
	Hereford ℳ	55	27	52·2	33·2	42·2	− 9·6	38	25	4	0·12	−0·56	*	*
	Cirencester	53	28	48·4	31·2	39·6	−12·4	18	41	2	0·12	−0·63	26	34
	Oxford	53	29	50·7	32·3	41·2	−11·1	24	38	2	0·09	−0·55	26	34
5. ENGLAND, S.	London	54	28	50·7	31·4	40·8	−13·0	24	41	2	0·17	−0·44	25‡	32‡
	Strathfield Turgiss ℳ	55	27	51·3	29·6	40·1	−13·0	26	47	5	0·25	−0·39	*	*
	Dungeness	57	30	52·3	33·3	42·5	−11·3	40	24	4	1·70	+0·99	*	*
	Hastings (St. Leonard's)	53	31	51·5	35·9	43·5	−10·3	36	17	4	1·15	+0·36	36	46
	Southampton	57	31	53·2	32·6	43·6	− 9·7	51	26	4	0·22	−0·53	29	37
	Hurst Castle	56	34	52·3	37·4	44·6	− 9·3	38	13	5	0·64	−0·11	*	*
	Stowell ℳ	53	29	49·7	33·0	41·1	−11·7	22	35	4	0·21	?	27‡	34‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	54	34	49·4	38·3	43·7	− 6·8	27	10	7	0·79†	−0·97	*	*
	Glasgow	56	33	50·1	36·0	42·8	− 6·9	31	17	2	0·12	−0·83	31	40
	Ardrossan	57	37	52·4	40·4	46·2	− 3·9	36	4	1	0·04	−0·92	*	*
	Glenlee S	56	26	49·4	32·1	40·5	−10·2	21	38	4	0·22	?	*	*
	Douglas (Isle of Man)	58	31	50·8	37·2	43·8	− 7·1	33	13	6	0·73	−0·24	27	35
7. ENGLAND, N.W.	Newton Reigny (Penrith)	52	25	48·2	32·6	40·2	− 9·4	17	36	4	0·32	−0·49	27	35
	Barrow-in-Furness	52	32	49·6	36·7	43·0	− 8·9	29	15	6	0·90	−0·03	*	*
	Stonyhurst	51	27	47·6	32·5	39·8	−10·8	16	35	4	0·69	−0·54	25	32
	Blackpool ℳ	54	31	50·0	39·2	44·4	− 8·0	29	8	4	0·70	−0·27	27	34
	Manchester	51	27	48·7	31·4	39·8	−11·6	19	40	4	0·60	−0·38	*	*
	Liverpool Obsr (Bidston)	53	35	49·4	38·4	43·7	− 9·3	27	10	6	0·60	−0·22	*	*
	Llandudno ℳ	53	33	50·5	40·0	45·1	− 8·8	30	6	7	0·79	−0·08	20	26
	Holyhead	56	28	52·0	42·7	47·2	− 6·6	36	0	6	0·87	−0·09	*	*
8. ENGLAND, S.W.	Llandovery	57	25	53·3	32·4	42·5	−10·3	44	27	7	0·63	−0·62	*	*
	Pembroke	54	36	51·4	41·7	46·4	− 7·0	32	1	6	0·62	−0·30	32	41
	Arlington (N. Devon)	53	33	50·3	37·0	43·5	− 9·2	32	14	7	0·95	−0·35	*	*
	Cullompton ℳ	55	29	53·2	32·9	42·8	−10·8	44	25	3	0·23	−0·67	29	37
	Falmouth	55	39	52·1	41·2	46·5	− 8·4	35	2	7	0·95	−0·30	34	43
	Plymouth	55	37	53·0	39·5	46·1	− 8·6	39	7	5	0·41	−0·48	32	41
	Prawle Point	57	34	54·7	37·4	45·8	− 7·4	46	13	6	0·17	?	*	*
9. IRELAND, N.	Malin Head	53	38	49·7	42·4	45·9	− 4·0	27	0	7	0·44	?	*	*
	Londonderry	58	35	51·6	38·9	45·1	− 5·2	35	9	7	0·93	−0·02	*	*
	Mullaghmore	58	38	52·7	41·4	46·9	− 4·0	37	2	6	0·91	−0·04	*	*
	Belmullet	56	39	52·1	42·9	47·4	− 4·5	38	0	5	0·77	?	*	*
	Markree Castle	56	30	50·9	38·5	44·5	− 6·3	32	10	6	0·93	+0·08	19	25
	Brookeborough	57	29	50·8	31·0	42·1	− 8·4	34	22	6	0·44	?	*	*
	Armagh	58	30	50·4	35·6	42·8	− 8·0	32	18	5	0·51	−0·19	24	31
	Donaghadee	57	37	50·4	41·3	45·7	− 5·7	29	2	5	0·85	+0·10	*	*
	Edgeworthstown	56	29	50·9	34·0	42·2	− 8·7	35	22	6	0·32	−0·40	*	*
10. IRELAND, S.	Dublin	55	33	50·5	37·4	43·8	− 8·0	32	13	5	0·29	−0·39	27	35
	Parsonstown	54	27	51·4	34·3	42·6	− 9·1	37	22	4	0·12	−0·64	23	29
	Kilkenny	57	27	51·4	34·7	42·8	− 9·3	36	20	2	0·12	−0·60	*	*
	Waterford	58	29	54·6	35·6	44·8	− 7·9	46	18	3	0·14	−0·78	*	*
	Roche's Point	56	37	53·0	39·9	46·3	− 6·9	39	6	3	0·05	−0·93	*	*
	Valencia	57	37	54·4	43·9	49·0	− 5·1	49	0	6	0·79	−0·48	20	25
	Killarney												*	*
	Foynes	55	37	52·2	41·5	46·7	− 5·7	35	1	6	0·42	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	56	44	53·1	46·0	49·5	− 6·9	53	0	6	0·38	−0·50	*	*
	Jersey	57	38	55·1	43·0	48·9	− 7·7	48	0	6	1·24	+0·30	29	37

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 41.] *Second Series.* WEEK ENDING MONDAY, 15TH OCTOBER, 1888. [*Price* 4*d.* [*Annual subscription, post paid,* £1 1*s.* 2*d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 164.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	57	32	50·2	40 4	45·2	2 below.	20	−10	4	− 2	1454	−289	755	+238
	1. SCOTLAND, EAST	64	32	54·3	41·1	47·5	1 above.	42	− 4	3	− 4	1727	−504	730	+179
	2. ENGLAND, N.E.	59	34	53·6	41·5	47·4	2 below.	40	− 9	1	− 3	1839	−554	586	+101
	3. ENGLAND, EAST	60	28	54·0	38·4	45·9	5 below.	42	−13	10	+ 7	2322	−429	709	+199
	4. MIDLAND COUNTIES	61	25	54·4	33·0	44·9	5 below.	46	− 6	17	+12	2197	−523	711	+199
	5. ENGLAND, SOUTH	63	26	55·2	37·4	46·0	6 below.	47	−15	13	+10	2449	−526	614	+238
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	58	26	53·0	42·1	47·4	2 below.	38	−12	0	− 4	1932 *	−499	520	+118
	7. ENGLAND, N.W.	56	30	52·2	42·7	47·3	3 below.	37	−15	0	− 3	2062	−438	515	+131
	8. ENGLAND, S.W.	61	26	55·6	39·8	47·5	5 below.	48	−17	6	+ 5	2307	−527	506	+272
	9. IRELAND NORTH	59	28	54·0	41·6	47·6	2 below.	41	− 9	1	− 3	2030 *	−332	427	+ 75
	10. IRELAND, SOUTH	59	26	55·2	40·4	47·6	4 below.	46	−14	4	+ 1	2398 *	−339	368 *	+128
	— CHANNEL ISLANDS	60	35	56·4	45·7	50·9	4 below.	62	−20	0	0	2679	−402	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 164.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	6	8	1 less.	185	+10	30·2	−2·5	8	10	1086	− 21	28	− 1
	1. SCOTLAND, EAST	3	1	6 less.	158	+ 8	22·0	−2·5	15	20	1156	− 98	30	− 3
	2. ENGLAND, N.E.	3	1	6 less.	147	+ 3	20·7	−0·6	27	37	1015	−142	27	− 4
	3. ENGLAND, EAST	2	2	5 less.	152	+ 5	19·8	−0·4	28	38	1123	−274	30	− 7
	4. MIDLAND COUNTIES	0	less than ½	7 less.	135	− 9	19·0	−4·0	34	45	1057	−193	28	− 5
	5. ENGLAND, SOUTH	1	1	6 less.	139	0	20·6	−0·8	39	52	1121	−222	30	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	3	1	9 less.	150	−12	30·4	−4·7	17	23	1200	− 16	32	0
	7. ENGLAND, N.W.	2	1	9 less.	151	0	21·9	−6·1	21	28	1111	−108	29	− 3
	8. ENGLAND, S.W.	2	1	10 less.	155	− 2	25·7	−7·5	38	51	1323	−128	35	− 4
	9. IRELAND, NORTH	2	1	7 less.	159	−21	27·5	−0·4	22	29	1035	− 70	28	− 2
	10. IRELAND, SOUTH	2	1	8 less.	141 *	−26	23·8	−3·8	30	40	1259	− 35	34	0
	— CHANNEL ISLANDS	4	2	7 less.	172	+ 2	22·8	−1·9	42	55	1533	−214	40	− 6

General Remarks.

Weather has been unsettled and rainy in the extreme north of Scotland, but in all other parts of the Kingdom the condition has been generally fine and dry.

Temperature has continued below the mean in all districts except "Scotland, E." The deficit, however, has not been so large as that of last week, having ranged from 1° to 4° in most of our western and northern districts, to 5° or 6° over eastern, central, southern, and south-western England. The highest of the maxima, which were recorded on the 12th at most of the English stations and on various dates over Ireland and Scotland, ranged from 56° in "England, N.W." to 63° in "England, S." and 64° in "Scotland, E." The lowest of the minima, which occurred generally either at the beginning or towards the end of the period, varied from 25° to 30° in most parts of England, from 26° to 28° in Ireland, and from 26° to 32° in Scotland. In "England, N.E." the lowest reading was 34° and in the "Channel Islands" 35°. During the night of the 14th—15th thermometers exposed on the grass over the inland parts of south-western, southern, and south-eastern England fell to between 21° and 24°.

Rainfall has been less than the mean. The fall has been very slight in all districts excepting "Scotland, N."

Bright sunshine shows an increase over some of our more southern and south-western districts, but a decrease elsewhere. The percentage of the possible amount of duration ranged from 10 to 23 in Scotland, from 29 to 40 in Ireland, and from 28 to 52 over England. In the "Channel Islands" the percentage was 55.

Depressions observed.—During the earlier days of the period the distribution of pressure over our Islands continued anticyclonic. As the week progressed, however, some deep depressions travelled in an easterly or south-easterly direction off our northern coasts and over Scandinavia, and the wind in the north and east of Scotland blew a moderate to strong gale from the North-Westward. As the week drew towards its close these disturbances were passing away to the eastward of our area, and the conditions over our Islands and their neighbourhood had again become anticyclonic.

* These values have been altered slightly owing to the receipt of further information.

A 56011. 350.—10/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

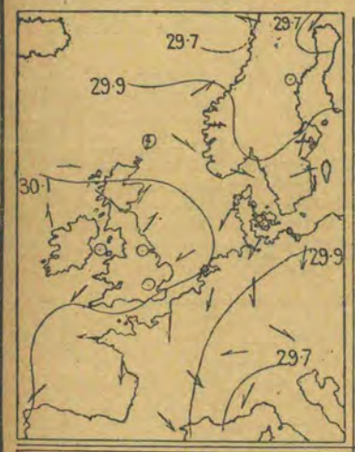
Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Tuesday, October 9.

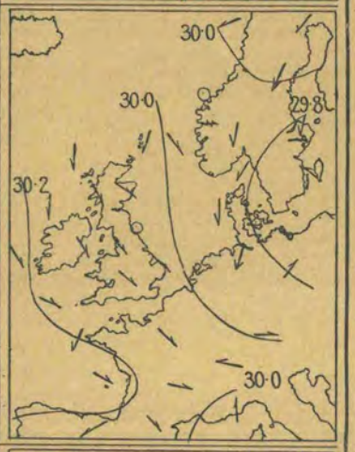
Weather fair over our Islands and the southern parts of Sweden and France, but rainy in Germany and the east of France. Snow falling at Haparanda and Munich.

Temperature fallen a little over our Islands and the north of Scandinavia, but risen elsewhere. Sharp frost occurring over central England in early morning, but thermometer afterwards rising rapidly.

Wind light Westerly over Scotland and the south of Scandinavia, but North-Easterly over Germany, the Netherlands, and the south of England, and Northerly in France. Subsequently veering to North-East at the French stations.

Sea slight or smooth generally, but rather rough at Christiansund.

Barometer falling generally. Large anticyclone lying over our Islands, with small depressions off the north of Scandinavia and a larger disturbance over Switzerland and northern Italy. New depression appearing later over Germany.



Wednesday, October 10.

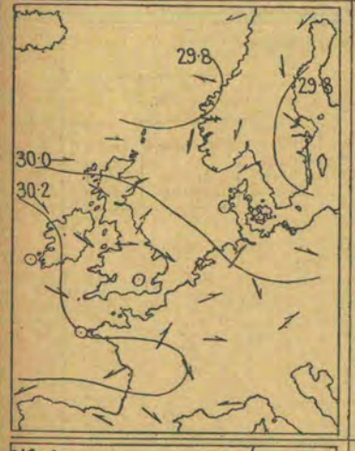
Weather fine in the north of Scandinavia and the west and south of France, but cloudy elsewhere, with rain over the Netherlands and North Germany. Showers falling later in many parts of western Europe.

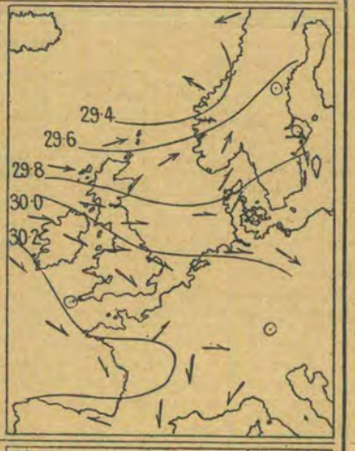
Temperature risen a few degrees over England, but fallen in most other localities. Maximum readings somewhat higher than of late: thermometer rising to 59° at Prawle Point and in London, and to 60° at Leith.

Wind light North-Westerly in our Islands, but moderate Northerly on the eastern shores of the North Sea, and Easterly in the west and south of France.

Sea slight or smooth generally, but rough at Cape Gris Nez.

Barometer falling over our Islands and the North Sea, but rising elsewhere. Large anticyclone lying over the west coasts of the United Kingdom and France, and smaller high-pressure system over the north of Scandinavia, with depressions over North Germany and the Gulf of Genoa. German depression subsequently moving north-eastwards to the Baltic.





Thursday, October 11.

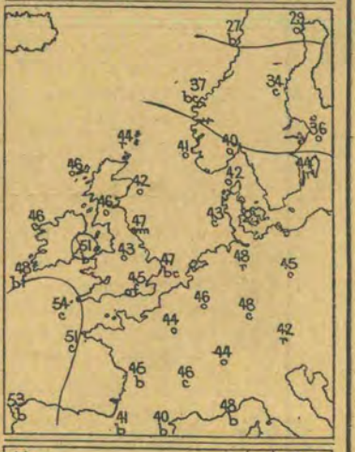
Weather fine over the greater part of England and France, but dull elsewhere, with fog in the south of Ireland, and rain in the north of Scotland and some parts of Germany.

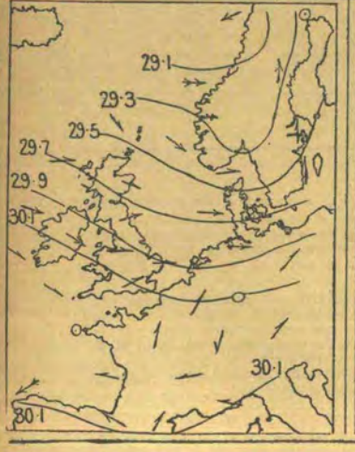
Temperature fallen a little in the west and north, but risen elsewhere. Maximum readings somewhat lower than on previous day, more especially in the south of Scotland.

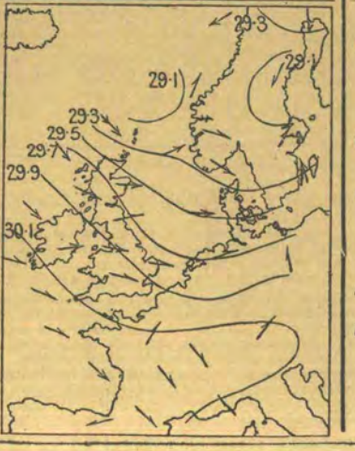
Wind light Westerly in the north of Scotland, but North-Westerly over Ireland and England, and Easterly in the west and south of France. Subsequently increasing to strong breeze from Westward in the extreme north, with gale at Wick in night.

Sea slight or smooth generally.

Barometer falling in Scotland and Scandinavia, but rising elsewhere. Anticyclone extending from the south-west of Ireland to the west of France, with a large depression over the Baltic, and another to the northward of our Islands. Brisk fall taking place in north later.







Friday, October 12.

Weather fine in France and the south of England, but cloudy elsewhere, with rain in Sweden, Denmark, North Germany, and the north-west of our Islands. Showers falling later in most parts of Western Europe.

Temperature risen very generally. Maximum readings a little higher than on Thursday; thermometer at Leith rising to 61°.

Wind moderate or fresh from the Westward over our Islands and the North Sea, but Southerly in Sweden, and Easterly in the west and south of France. Subsequently veering to the North-Westward in the north and east of Scotland, and increasing to a gale.

Sea rather rough in the extreme north and north-west, but moderate to smooth elsewhere.

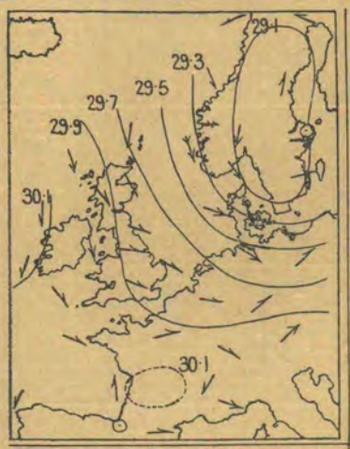
Barometer falling at all but the French and German stations. Anticyclone lying over France and the Bay of Biscay, with a large depression off the north-west of Norway. Secondary disturbance subsequently skirting the north-east of Scotland, and moving on to the south of Norway.

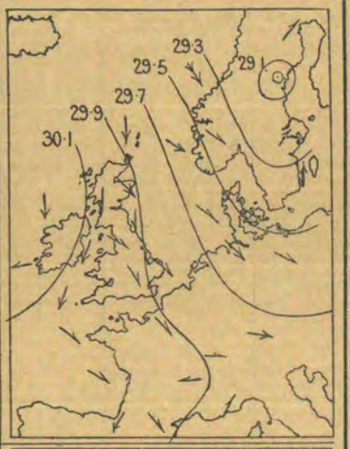
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

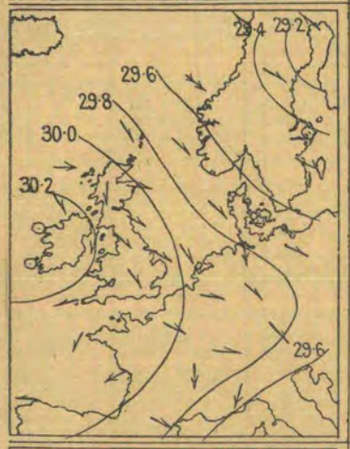
Synoptic Charts.

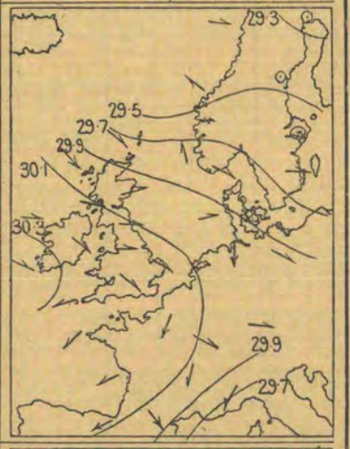
PRESSURE AND WIND.

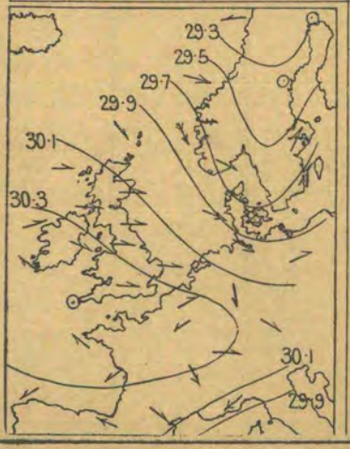
8 a.m. | **6 p.m.**

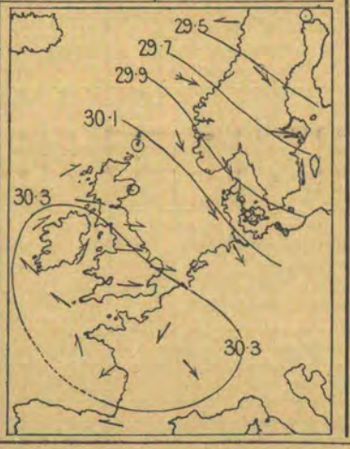












Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, October 13.

Weather fair over the greater part of our Islands and fine in the south of France, but rainy at many of the Scandinavian and German stations and showery in the north-east of Scotland.

Temperature risen somewhat in France and Germany, but fallen elsewhere. Maximum readings a little lower than on previous day.

Wind moderate to strong from the North-Westward or Northward over our Islands and the North Sea, but moderate from South-West or South in Sweden and Germany.

Sea rough in the north and north-west, but moderate to smooth elsewhere.

Barometer falling at all but the Scotch and Norwegian stations. Pressure highest off the west of Ireland, with a large and complex area of low readings over Scandinavia. Rise taking place later in all parts of the United Kingdom as well as in Scandinavia and Denmark.

Sunday, October 14.

Weather fair or fine generally, but rainy in the Shetlands and west of Norway. Rain falling later in Caithness and the Hebrides, as well as in Denmark and North Germany.

Temperature fallen several degrees at all but our extreme northern stations. Frost occurring over the more central districts in early morning. Maximum readings below 55° at most stations.

Wind Northerly or North-Easterly over France and the west and south of our Islands, but North-Westerly elsewhere; light to fresh in force generally.

Sea rather rough off the south-east of England, and also in the extreme north, but moderate to smooth elsewhere.

Barometer falling a little in the north of Scotland, and more decidedly in the south of France, but rising elsewhere. Anticyclone lying over Ireland, with a depression over the Gulf of Bothnia, and another over the Gulf of Genoa. Further disturbances appearing later off the Norwegian coasts.

Monday, October 15.

Weather fair over our Islands, France, and the Netherlands, but cloudy elsewhere, with rain in North Germany and the south of Denmark, and snow at Christiansund.

Temperature fallen in France, the south-east of England, and the north of Scandinavia, but risen in most other localities. Sharp frost occurring in early morning over the central parts of England and Ireland, but thermometer afterwards rising to higher level than on previous day.

Wind light from the Westward on our north and east coasts, and strong from North-West on the eastern shores of the North Sea, but Northerly or North-Easterly at our southern and the French stations.

Sea rather rough off the west of Norway, but slight or smooth elsewhere.

Barometer rising at all but the Swedish stations. Anticyclone lying over the greater part of Ireland, England, and France, with a depression over the north of Scandinavia, and a trough of "V-shaped" secondary disturbances over Sweden. Slight fall taking place in west later.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟹ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending Oct. 8	Killarney	55	27	51·8	35·2	43·2	— 9·9	37	19	7	0·61	?	*	*

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	51	36	47·3	39·7	43·4	− 3·8	19	6	6	1·38	+0·40	*	*
	Stornoway	56	37	51·1	41·3	46·1	− 0·6	32	2	6	0·74	−0·36	12	16
	Wick	55	37	50·7	40·3	45·1	− 1·8	29	5	7	0·89	+0·24	*	*
	Lairg ℛ	56	34	50·0	39·1	44·4	− 1·6	29	8	6	0·42	−0·53	*	*
	Glencarron ℛ	52	36	49·1	40·5	44·7	− 1·4	25	4	7	1·42†	?	3	4
	Fort Augustus ℛ	57	32	53·2	41·6	47·2	− 0·9	38	1	5	0·18†	?	*	*
1. SCOTLAND, E.	Nairn	58	37	52·9	41·4	47·0	− 0·7	38	2	4	0·14	−0·41	*	*
	Aberdeen	57	38	53·3	41·6	47·3	− 0·1	39	1	5	0·17	−0·49	22	30
	Braemar ℛ	56	35	51·2	39·0	44·9	+ 0·3	33	8	6	0·19	−0·72	10‡	14‡
	Ochtertyre ℛ	64	36	59·1	41·9	50·3	+ 3·2	59	0	1	0·01	−1·00	*	*
	Leith	61	35	55·9	42·3	48·9	+ 0·7	48	0	1	0·06	−0·40	*	*
	Marchmont ℛ	56	32	53·1	40·6	46·7	+ 0·9	39	4	2	0·07	−0·68	12	17
2. ENGLAND, N.E.	Alnwick Castle	58	37	53·3	43·4	48·2	+ 0·1	43	0	3	0·08	−0·55	*	*
	Durham	58	34	54·0	41·5	47·6	− 0·7	41	1	1	0·03	−0·59	20	28
	Shields	58	35	53·9	41·4	47·5	− 1·4	41	2	2	0·05	−0·51	*	*
	Scarborough ℳ	58	38	54·6	41·2	47·7	− 1·4	43	2	3	0·15	−0·56	29‡	39‡
	York	59	34	54·6	38·4	46·3	− 3·6	45	10	3	0·11	−0·50	32	43
	Spurn Head	54	39	51·3	42·9	47·0	− 2·9	35	0	3	0·08	?	*	*
3. ENGLAND, E.	Hillington ℳ	50	28	54·8	38·0	46·2	− 3·6	46	11	2	0·03	−0·57	28	38
	Yarmouth	53	33	51·4	40·9	46·0	− 5·4	33	3	5	0·51	−0·18	*	*
	Geldeston	58	31	54·3	38·2	46·0	− 5·6	44	11	4	0·25	−0·36	31	41
	Cambridge	58	32	55·1	37·9	46·3	− 5·2	47	11	1	0·04	−0·49	24	33
	Rothamsted	60	32	53·9	36·1	44·7	− 5·9	44	17	1	0·01	−0·69	*	*
	Ingatestone	58	33	54·2	39·0	46·4	− 4·9	43	8	1	0·05	−0·60	29‡	39‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	58	32	55·3	36·6	45·7	− 4·4	49	15	1	0·02	−0·63	30‡	40‡
	Loughborough	59	28	56·0	34·3	44·8	− 5·1	52	22	0	—	−0·68	*	*
	Cheadle ℳ	53	29	51·2	37·4	44·1	− 4·7	34	13	1	0·03	−0·82	*	*
	Churchstoke ℳ	58	29	54·5	35·4	44·7	− 5·0	47	18	0	—	−0·80	34	45
	Hereford ℳ	61	28	56·6	36·9	46·5	− 3·8	53	14	0	—	−0·68	*	*
	Cirencester	56	25	52·6	34·3	43·2	− 7·4	41	22	1	0·03	−0·69	38	50
	Oxford	57	30	54·7	37·0	45·6	− 5·2	46	14	0	—	−0·61	35	46
5. ENGLAND, S.	London	59	30	55·1	36·3	45·4	− 6·7	48	16	1	0·04	−0·57	30‡	40‡
	Strathfield Turgiss ℳ	58	26	56·0	33·6	44·3	− 7·4	51	24	1	0·09	−0·54	*	*
	Dungeness	59	30	54·3	38·6	46·2	− 6·0	44	10	1	0·10	−0·64	*	*
	Hastings (St. Leonard's)	59	36	53·7	41·3	47·3	− 4·8	40	2	1	0·24	−0·57	38	51
	Southampton	63	29	58·8	36·7	47·4	− 4·6	60	15	1	0·09	−0·66	50	66
	Hurst Castle	59	31	55·6	39·6	47·4	− 5·3	48	7	1	0·06	−0·67	*	*
	Stowell ℳ	56	28	53·2	35·6	44·1	− 7·0	42	18	1	0·04	?	37‡	49‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	58	38	51·7	42·8	47·1	− 1·8	36	0	6	0·30†	−1·47	*	*
	Glasgow	57	34	53·0	42·8	47·8	0·0	41	0	1	0·02	−0·90	11	15
	Ardrossan	57	38	54·3	43·0	48·5	− 0·4	46	0	1	0·01	−0·96	*	*
	Glenlee ℛ	55	26	52·3	39·2	45·6	− 3·2	37	8	2	0·15	?	*	*
	Douglas (Isle of Man)	57	31	53·6	42·7	48·0	− 2·1	42	0	3	0·07	−0·91	23	31
7. ENGLAND, N.W.	Newton Reigny (Penrith)	56	30	52·3	39·7	45·8	− 2·2	36	6	2	0·03	−0·77	19	26
	Barrow-in-Furness	54	36	52·6	43·6	48·0	− 2·7	42	0	2	0·12	−0·81	*	*
	Stonyhurst	52	31	50·5	39·4	44·8	− 4·4	31	7	2	0·30	−0·95	21	28
	Blackpool ℳ	55	36	52·9	44·4	48·2	− 3·0	43	0	1	0·05	−0·93	24	31
	Manchester	53	32	51·2	39·0	44·9	− 4·9	33	8	1	0·16	−0·82	*	*
	Liverpool Obs' (Bidston)	54	38	52·4	44·9	48·5	− 2·9	46	0	2	0·04	−0·78	*	*
	Llandudno ℳ													
	Holyhead	56	45	53·7	48·1	50·7	− 1·7	61	0	2	0·08	−0·93	*	*
8. ENGLAND, S.W.	Llandovery	61	26	57·4	33·0	44·6	− 6·9	56	25	3	0·09	−1·16	*	*
	Pembroke	56	42	54·1	46·1	50·0	− 2·9	56	0	1	0·03	−0·89	34	46
	Arlington (N. Devon)	56	30	53·6	38·1	45·6	− 5·8	42	11	2	0·12	−1·19	*	*
	Cullompton ℳ	60	26	56·7	36·1	46·1	− 5·8	53	17	0	—	−0·90	35	47
	Falmouth	57	40	54·5	44·0	49·1	− 4·5	50	0	2	0·06	−1·19	46	61
	Plymouth	60	35	55·8	40·8	48·1	− 5·0	48	3	2	0·03	−0·84	37	49
	Prawle Point	60	37	57·4	40·6	48·8	− 3·7	53	4	3	0·08	?	*	*
9. IRELAND, N.	Malin Head	55	45	52·4	47·0	49·6	+ 0·7	53	0	3	0·19	?	*	*
	Londonderry	57	37	53·5	42·7	47·9	− 0·9	41	0	3	0·09	−0·89	*	*
	Mullaghmore	58	38	55·0	44·1	49·4	0·0	52	0	2	0·15	−0·77	*	*
	Belmullet	56	36	53·6	43·4	48·4	− 2·5	45	0	4	0·23	?	*	*
	Markree Castle	58	28	54·8	37·6	46·0	− 3·0	46	12	3	0·19	−0·69	25	33
	Brookeborough	59	28	54·4	37·7	45·8	− 2·7	45	12	0	—	?	*	*
	Armagh	57	33	54·3	40·4	47·1	− 1·7	42	4	1	0·01	−0·69	18	24
	Donaghadee	56	39	54·1	44·3	49·1	− 1·4	50	0	2	0·02	−0·73	*	*
	Edgeworthstown	56	29	53·6	37·6	45·4	− 3·4	42	12	0	—	−0·70	*	*
10. IRELAND, S.	Dublin	57	35	53·9	42·2	47·9	− 2·5	41	0	1	0·01	−0·69	28	37
	Parsonstown	56	29	54·6	38·3	46·2	− 3·5	45	10	3	0·08	−0·67	26	35
	Kilkenny	58	26	54·6	37·7	45·9	− 4·2	45	12	0	—	−0·70	*	*
	Waterford	59	27	56·7	39·4	47·8	− 3·9	52	7	0	—	−0·93	*	*
	Roche's Point	59	38	56·1	44·0	49·9	− 2·2	55	0	0	—	−0·95	*	*
	Valencia	58	36	56·6	42·4	49·3	− 3·6	51	0	4	0·15	−1·21	35	47
	Killarney	58	30	55·5	38·1	46·5	− 5·2	48	11	3	0·13	?	*	*
	Foynes	55	33	53·9	40·3	47·2	− 3·5	41	3	2	0·21	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	60	46	56·3	49·3	52·7	− 2·4	75	0	4	0·21	−0·67	*	*
	Jersey	59	35	56·4	42·0	49·0	− 6·4	49	0	3	0·20	−0·78	42	55

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ℛ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 42.] *Second Series.* WEEK ENDING MONDAY, 22ND OCTOBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 168.)	Observed during the Week. Highest.	Observed during the Week. Lowest.	Averages of Daily Maxima.	Averages of Daily Minima.	Averages of Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	57	32	51·9	42·6	47·1	2 above.	36	+ 4	0	− 9	1490	−288	755	+232
	1. SCOTLAND, EAST	58	37	53·0	43·3	48·0	3 above.	42	+ 5	0	−10	1769	−502	730	+176
	2. ENGLAND, N.E.	56	27	51·7	40·8	46·1	1 below.	34	− 6	3	− 4	1873	−565	589	+101
	3. ENGLAND, EAST	60	25	54·6	34·7	44·3	5 below.	47	+ 3	20	+14	2369	−430	729	+217
	4. MIDLAND COUNTIES	62	27	54·4	34·7	44·3	4 below.	47	+ 5	20	+12	2244	−521	731	+215
	5. ENGLAND, SOUTH	64	26	56·1	39·2	47·4	3 below.	50	0	8	+ 4	2499	−531	622	+245
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	59	29	53·8	42·5	48·0	1 above.	42	+ 1	0	− 7	1974	−414	529	+116
	7. ENGLAND, N.W.	61	26	54·4	41·0	47·5	1 below.	43	0	3	− 1	2105	−441	518	+133
	8. ENGLAND, S.W.	61	23	56·3	43·3	49·6	1 below.	53	− 4	0	− 2	2360	−536	506	+272
	9. IRELAND NORTH	62	30	56·0	43·1	49·4	2 above.	52	+11	0	− 6	2142	−328	427	+ 73
	10. IRELAND, SOUTH	62	39	57·0	46·0	51·3	2 above.	65	+14	0	− 4	2463	−331	368	+127
	— CHANNEL ISLANDS	61	38	57·9	46·9	52·3	2 below.	72	0	0	0	2751	−407	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 168.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	4	6	3 less.	189	+ 9	30·8	−2·6	9	13	1095	− 29	28	− 1
	1. SCOTLAND, EAST	2	1	6 less.	160	+ 6	22·1	−3·0	9	13	1165	−109	30	− 3
	2. ENGLAND, N.E.	1	less than ½	6 less.	148	− 1	20·7	−1·3	15	21	1030	−144	27	− 3
	3. ENGLAND, EAST	0	–	6 less.	152	+ 1	19·8	−1·1	35	49	1158	−259	30	− 7
	4. MIDLAND COUNTIES	0	–	7 less.	135	−13	19·0	−4·7	28	40	1085	−189	28	− 6
	5. ENGLAND, SOUTH	0	–	7 less.	139	− 3	20·6	−1·5	30	42	1151	−214	30	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	1	1	10 less.	151	−15	30·5	−5·7	13	19	1213	− 17	31	− 1
	7. ENGLAND, N.W.	0	–	10 less.	151	− 4	21·9	−7·6	20	28	1131	−102	29	− 3
	8. ENGLAND, S.W.	0	less than ½	10 less.	155	− 7	25·7	−8·5	29	41	1352	−121	36	− 3
	9. IRELAND, NORTH	2	2	7 less.	161	−23	27·7	−1·0	22	31	1077	− 65	28	− 2
	10. IRELAND, SOUTH	2	2	8 less.	143	−28	27·0	−4·5	21	29	1280	− 31	33	− 1
	— CHANNEL ISLANDS	1	2	8 less.	17	− 2	23·0	−2·6	46	63	1549	−195	41	− 5

General Remarks.

Weather has remained fair and dry in all but the extreme western and northern parts of the Kingdom. Over England, however, thick fogs and heavy dews have occurred almost every night.

Temperature has been two or three degrees above the mean in Ireland and Scotland, but below it in all the English districts. In "England, E." the deficit has amounted to 5°. The highest readings were observed, as a rule, between the 18th and 20th, when the thermometer rose a little above 60° in nearly all parts of Ireland and England. The lowest readings, which were registered on various dates, ranged from 23° in "England, S.W." (at Llandovery) and 25° in "England, E." to 37° in "Scotland, E." and 38° in the "Channel Islands". Over eastern and central England frost was experienced on most nights.

Rainfall has been entirely absent in "England, E.", the "Midland Counties", "England, S." and "England, N.W.", and very much less than the mean in all other districts. At some of the English stations, however, the heavy dews and fogs have occasionally yielded measurable amounts of water in the gauges.

Bright sunshine has been upon the whole less prevalent than it was last week. The percentage of the possible quantity has ranged from 13 in the north and east of Scotland to 42 in "England, S.", 49 in "England, E.", and 63 in the "Channel Islands".

Depressions observed.—No depressions have appeared in our immediate neighbourhood. Between the 18th and 20th, however, some disturbances were evidently moving northwards at a considerable distance to the westward of our Islands, while on the night of the 20th a large and deep system travelled eastwards across the north of Scandinavia. The western series occasioned a decided freshening of the South-Easterly winds in Ireland and the south-west of England, while the disturbance in the far north produced heavy Westerly and North-Westerly gales on the Norwegian coasts. Over England the weather has remained under the influence of a persistent anticyclone. The central portion of this was at first located over our south-eastern districts, but the system afterwards spread northwards to Denmark and Scandinavia. At the close of the week, however, it had returned to its original position, and the barometer was beginning to fall somewhat briskly on our western and northern coasts.

A 56088. 350.—10/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.

Weather

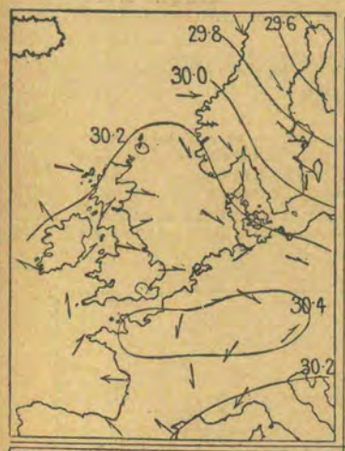
During the 24 hours succeeding

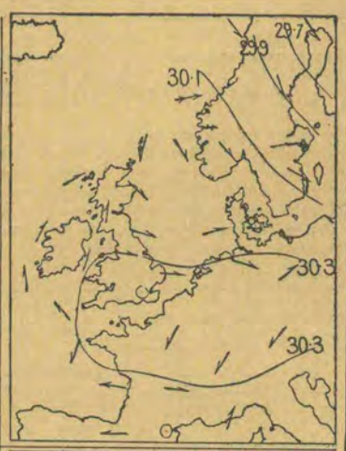
8 a.m. on the dates given.

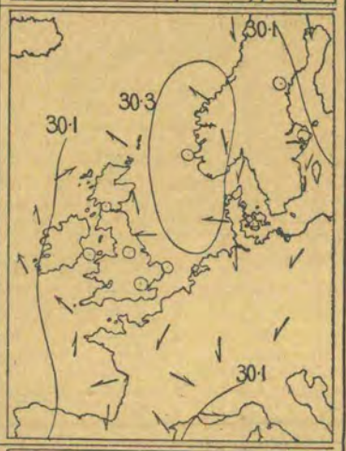
Synoptic Charts.

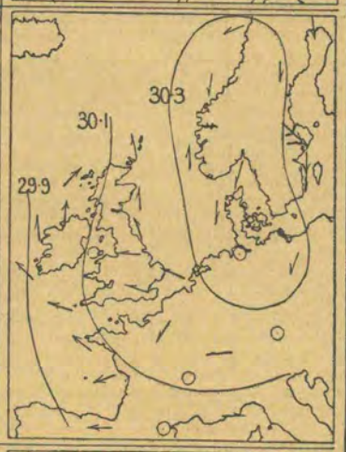
TEMPERATURE AND WEATHER

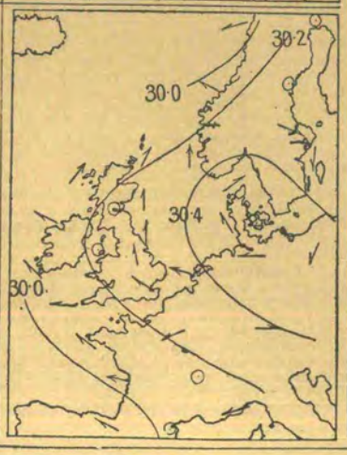
at 8 a.m.











Tuesday, October 16.

Weather dull in the west of our Islands, foggy over England, and rainy in the north of Scotland, but fine at most of the Continental stations.

Temperature changed very irregularly. Frost prevailing in early morning over the central parts of England, France, and Germany. Maximum readings below 55° in many parts of the United Kingdom.

Wind moderate from the Eastward in France, light from South-East on our western coasts, and light from West in the east, but strong from the North-Westward in Scandinavia.

Sea slight or smooth generally, but rough at Christiansund.

Barometer falling a little on the west coasts of our Islands and France, but rising elsewhere. Narrow anticyclonic band extending from the Channel Islands to south Germany, with a depression over eastern Lapland. Slight fall taking place later over the whole of western Europe.

Wednesday, October 17.

Weather dull on our western and extreme northern coasts, and foggy over central England and the south of Scotland, but fair in most other localities. Rain falling later at several of the Irish stations.

Temperature fallen a few degrees in the north of our Islands, but risen elsewhere. Maximum readings above 55° at our central and southern stations.

Wind moderate Easterly in France and South-Easterly on our western coasts, but light from West in the east of Great Britain and Northerly in Sweden and Denmark.

Sea moderate off the south of Ireland, but slight or smooth elsewhere.

Barometer falling at all but our north-eastern and the Scandinavian stations. Central portion of anticyclone now lying over England and the north-east of France, with lowest pressures in the north of Sweden. Depressions subsequently moving northwards outside our extreme western coasts.

Thursday, October 18.

Weather dull in the extreme west and north of our Islands, and foggy over Eastern and Central England, but fine at most of the Continental stations. Rain falling later in Ireland and the north of Scotland.

Temperature risen in most parts of the United Kingdom, but fallen on the Continent. Frost occurring over Central England in early morning, but daily maxima higher than of late. Thermometer rising to 60° at Loughborough, Cambridge, and Parsonstown, and 61° at Jersey.

Wind strong South-Easterly on our western coasts, but light and variable in the east, and Northerly in Sweden.

Sea rough at Valencia, but moderate to smooth elsewhere.

Barometer falling at all but the Scandinavian, Danish, and German stations. Large anticyclone lying over Norway, Denmark, and the Netherlands, but depressions moving northwards outside our western coasts.

Friday, October 19.

Weather dull over the northern parts of our Islands and Scandinavia, as well as in the south of France, but fine in most other localities. Rain falling later in the north of Scotland.

Temperature risen in our Islands, but fallen at most of the Continental Stations. Maximum readings above 55° in most parts of the United Kingdom, highest of all being 61° at Holyhead and 60° at Loughborough.

Wind moderate to strong from the South-Eastward over England, Ireland, and the North Sea, and Southerly in Scotland, but moderate from the Northward in Sweden.

Sea rough at Stornoway and rather rough on our extreme south-west coasts.

Barometer falling somewhat in France and the northern parts of our Islands and Norway, but rising elsewhere. Large anticyclone extending from Central Sweden to North Germany, but depressions still moving northwards outside our western coasts.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

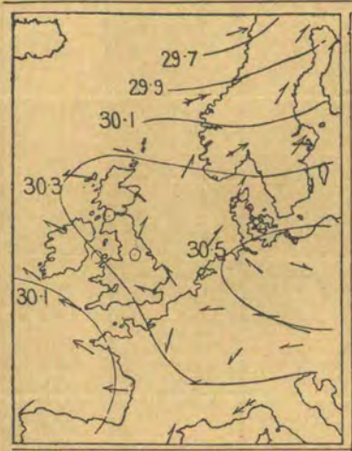
Weather

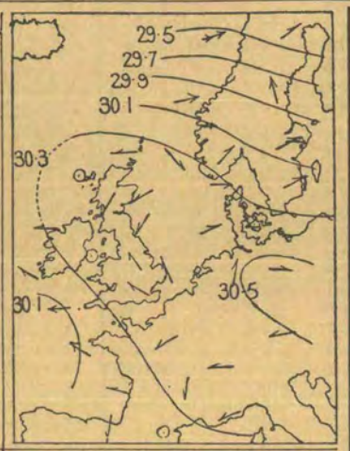
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Saturday, October 20.

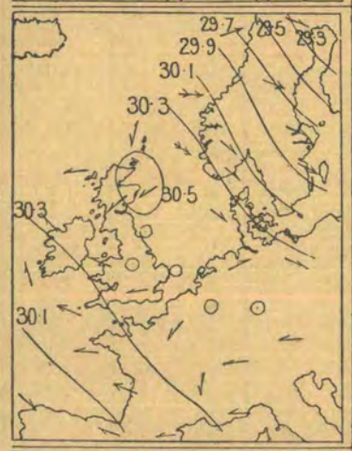
Weather rainy in the south of Norway and the north-west of France, and foggy over Central England and the south of Scotland, but fair or fine elsewhere. Rain falling later in nearly all parts of Scandinavia, and solar or lunar halos seen in the south of England.

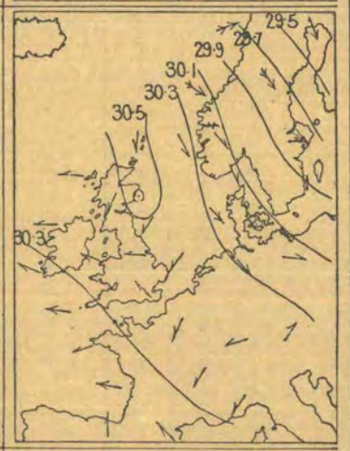
Temperature fallen at all but the Scandinavian stations. Sharp frost occurring in early morning over the central parts of England, France, and Germany, but thermometer afterwards rising a little above 60° over our midland counties.

Wind South-Westerly in Scandinavia and Denmark, with gales in the west of Norway, and variable in Scotland, but Easterly or South-Easterly elsewhere; strong at the mouth of the Channel.

Sea rather rough at the mouth of the Channel and also at Skudesnaes.

Barometer rising at all but the Scandinavian and Danish stations. Anticyclone lying over Germany, with a deep depression off the north-west of Norway and a large shallow area of low pressure over the Bay of Biscay. Norwegian disturbance subsequently travelling eastwards.





Sunday, October 21.

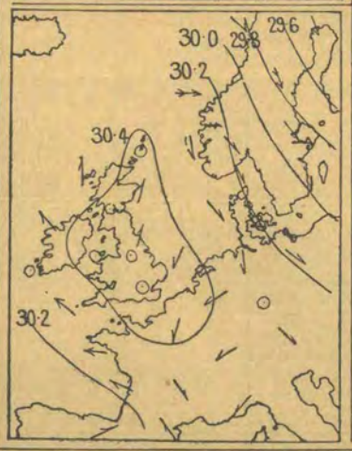
Weather fair generally but foggy over England; unsettled, with rain and snow, in Norway, and rainy at Roche's Point and Corunna. Fog clearing later.

Temperature risen in the south-west of our Islands and also in Sweden, Denmark, and Germany, but fallen elsewhere. Sharp frost occurring in early morning over the central parts of England, France, and Germany.

Wind North-Westerly in Scandinavia, Denmark, and North Germany; strong to a gale in Norway. Light and variable in the east of our Islands, but fresh from the South-Eastward on our western and the French coasts.

Sea high off the west of Norway, and rather rough at the mouth of the Channel.

Barometer rising at all but the Swedish, Danish, and German stations. Broad anticyclonic band extending from our northern coasts to South Germany, and deep depression passing away over eastern Lapland. Slight fall taking place later on our extreme north-west coasts.



Monday, October 22.

Weather fair generally, but foggy or misty in many parts of our Islands and France, and unsettled in Scandinavia, with snow at Christiansund. Rain falling later in the north of Scotland.

Temperature risen somewhat over England, France, and Germany, but fallen elsewhere. Frost occurring over Central France in early morning, but none reported over England.

Wind moderate Easterly on our southern coasts, but light Southerly in the north, and strong North-Westerly in Scandinavia.

Sea high at Christiansund, but moderate to smooth elsewhere.

Barometer falling somewhat over the northern parts of our Islands, and also in Germany, but rising elsewhere. Anticyclone lying over England, the east of Scotland, and the north-east of France, with low pressures over Lapland. Shallow area of low pressure appearing later to the northward of our Islands.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	52	32	47·7	38·9	43·2	− 2·7	21	9	5	0·64	−0·35	*	*
	Stornoway	55	35	52·7	44·1	48·3	+ 2·8	44	0	5	0·54	−0·57	9	13
	Wick	53	43	51·7	44·4	47·9	+ 2·4	41	0	3	1·04	+0·39	*	*
	Lairg ℳ	57	32	52·3	42·6	47·3	+ 2·5	37	0	5	0·69	−0·26	*	*
	Glencarron ℳ	55	35	53·1	41·3	47·0	+ 2·0	38	2	3	0·37†	?	8	12
	Fort Augustus ℳ	56	33	53·8	44·5	49·0	+ 2·3	49	0	3	0·40†	?	*	*
1. SCOTLAND, E.	Nairn	58	38	54·4	44·9	49·5	+ 3·2	53	0	3	0·26	−0·27	*	*
	Aberdeen	54	42	51·6	46·6	49·0	+ 3·1	49	0	4	0·21	−0·44	7	10
	Braemar ℳ	54	39	51·2	43·2	47·1	+ 4·3	36	0	3	0·30	−0·60	7‡	10‡
	Ochtertyre ℳ	56	38	53·9	41·1	47·3	+ 1·5	41	3	3	0·04	−0·97	*	*
	Leith	58	37	53·9	42·9	48·2	+ 1·5	43	0	0	0·01§	−0·44	*	*
	Marchmont ℳ	58	38	53·1	40·9	46·8	+ 2·8	38	3	1	0·03	−0·72	14	20
2. ENGLAND, N.E.	Alnwick Castle	53	30	51·3	43·0	47·0	+ 0·4	35	0	0	—	−0·62	*	*
	Durham	56	33	52·1	38·5	45·1	− 1·8	36	10	1	0·01	−0·67	11	15
	Shields	56	38	53·3	42·6	47·8	+ 0·4	41	0	0	—	−0·55	*	*
	Scarborough ℳ	53	33	50·7	40 9	45·7	− 1·5	31	3	1	0·02	−0·69	18‡	26‡
	York	55	27	52·0	36·4	44·0	− 4·3	38	16	0	0·01§	−0·57		
	Spurn Head	54	39	51·0	43·1	46 9	− 1·3	34	0	1	0·04	?	*	*
3. ENGLAND, E.	Hillington ℳ	58	30	51·2	33·6	43·6	− 4·9	46	24	0	—	−0·60	36	51
	Yarmouth	53	35	51·7	40·1	45·7	− 4·1	34	5	0	—	−0·69	*	*
	Geldeston	59	27	55·0	35·0	44·7	− 5·1	48	20	0	—	−0·61	37	51
	Cambridge	60	25	56·6	30·3	43·1	− 6·5	57	33	0	—	−0·51	34	47
	Rothamsted	57	28	55·4	32·6	43·7	− 4·9	51	26	0	0·02§	−0·68	*	*
	Ingatestone	57	33	54·4	36·6	45·2	− 4·3	45	15	0	—	−0·65	33‡	46‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	58	28	52·9	34·9	43·6	− 5·2	41	20	0	0·01§	−0·66	15‡	21‡
	Loughborough	62	28	55·1	31·3	42·8	− 5·2	51	30	0	—	−0·68	*	*
	Cheadle ℳ	58	36	53·4	38·7	45·8	− 1·5	40	9	0	—	−0·85	*	*
	Churchstoke ℳ	57	27	54·2	35·1	44·4	− 3·5	46	19	0	—	−0·81	30	43
	Hereford ℳ	61	29	55·0	34·2	44·3	− 4·4	49	22	0	—	−0·68	*	*
	Cirencester	57	31	54·0	35·4	44·4	− 4·4	45	18	0	—	−0·72	35	49
	Oxford	58	31	56·3	33·4	44·5	− 4·6	54	24	0	—	−0·61	33	46
5. ENGLAND, S.	London	58	33	56·3	35·7	45·7	− 4·4	52	18	0	—	−0·61	16‡	23‡
	Strathfield Turgiss ℳ	58	26	56·4	31·5	43·6	− 6·2	55	29	0	—	−0·61	*	*
	Dungeness	57	32	54·3	43·3	48·6	− 1·9	46	0	0	—	−0·75	*	*
	Hastings (St. Leonard's)	58	41	54·7	44·3	49·4	− 1·4	52	0	0	—	−0·82	43	58
	Southampton	64	34	59·4	37·9	48·3	− 2·5	61	11	0	—	−0·75	36	50
	Hurst Castle	60	38	56·3	43·1	49·6	− 1·5	53	0	0	0·02§	−0·71	*	*
	Stowell ℳ	58	34	55·0	38·3	46·4	− 3·2	46	10	0	0·01§	?	26‡	37‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	59	42	55·8	47·0	51·3	+ 3·8	65	0	4	0·34†	−1·45	*	*
	Glasgow	56	41	52·9	44·0	48·3	+ 2·5	44	0	0	—	−0·91	4	6
	Ardrossan	57	38	54·3	44·6	49·3	+ 2·0	51	0	0	—	−0·97	*	*
	Glenlee ℳ	56	29	52·3	36·4	44·1	− 2·8	38	16	0	—	?	*	*
	Douglas (Isle of Man)	55	34	53·6	40·4	46·8	− 2·1	40	4	0	0·01§	−0·98	22	31
7. ENGLAND, N.W.	Newton Reigny (Penrith)	58	26	54·8	36·0	45·1	− 1·2	47	17	0	—	−0·89	14	20
	Barrow-in-Furness	57	39	53·9	44·1	48·9	0·0	48	0	0	—	−0·95	·	·
	Stonyhurst	56	35	52·4	40·7	46·4	− 1·1	36	4	0	—	−1·25	20	28
	Blackpool ℳ	58	35	54·6	40·4	47·3	− 2·3	44	4	0	—	−0·98	25	35
	Manchester	58	38	53·9	39·4	46·4	− 1·9	42	7	0	0·01§	−0·96	*	*
	Liverpool Obsy (Bidston)	55	37	53·4	41·0	47·0	− 2·8	39	3	0	—	−0·71	*	*
	Llandudno ℳ													
	Holyhead	61	42	57·7	45·3	51·3	+ 0·4	65	0	0	0·01§	−1·00	*	*
8. ENGLAND, S.W.	Llandovery	61	23	58·3	35·1	46 4	− 3·4	60	19	0	—	−1·25	*	*
	Pembroke	57	43	54·4	47·1	50·6	− 1·4	60	0	0	0·01§	−0·92	26	37
	Arlington (N. Devon)	58	35	55·7	41·9	48·6	− 1·2	47	0	0	—	−1·31	*	*
	Cullompton ℳ	60	31	56·8	36·4	46 3	− 3·6	54	16	0	0·02§	−0·83	31	42
	Falmouth	57	40	56·2	48·9	52·4	+ 0·3	73	0	2	0·06	−0·69	25	35
	Plymouth	58	38	56·3	45·6	50·8	− 1·0	62	0	0	—	−0·85	34	48
	Prawle Point	59	45	56·1	47·9	51·9	+ 0·2	69	0	0	—	?	·	·
9. IRELAND, N.	Malin Head	56	44	54·3	47·1	50·6	+ 3·0	60	0	1	0·02	?	*	*
	Londonderry	62	38	57·5	42·5	49·8	+ 2·3	55	0	2	0·05	−0·94	*	*
	Mullaghmore	59	44	56·9	46·7	51·7	+ 4·2	68	0	2	0·26	−0·66	*	*
	Belmullet	59	43	56·9	46·9	51·8	+ 1·8	69	0	3	0·38	?	*	*
	Markree Castle	60	30	56·5	39·5	47·8	+ 0·7	51	7	2	0·20	−0·68	24	34
	Brookeborough	60	33	56·2	40·0	47·9	+ 1·3	50	6	1	0·14	?	*	*
	Armagh	57	31	55·7	39·3	47·3	+ 0·2	48	8	2	0·12	−0·58	20	28
	Donaghadee	56	39	54·1	44·1	49·0	− 0·7	49	0	1	0·01	−0·74	*	*
	Edgeworthstown	58	37	56·0	41·7	48·6	+ 1·8	47	1	4	0·21	−0·49	*	*
10. IRELAND, S.	Dublin	58	38	55·4	44·1	49·6	+ 0·7	53	0	3	0·07	−0·63	24	34
	Parsonstown	60	30	56·6	40·7	48·4	+ 0·6	50	4	1	0·02	−0·70	18	26
	Kilkenny	60	36	56·9	43·9	50·2	+ 2·2	57	0	0	—	−0·70	*	*
	Waterford	59	34	56·9	45·9	51·2	+ 0·9	64	0	1	0·02	−0·91	*	*
	Roche's Point	57	42	56·0	50·3	53·1	+ 2·2	78	0	3	0·09	−0·86	*	*
	Valencia	62	41	58·9	49·7	54·2	+ 2·6	85	0	5	0·41	−0·97	20	28
	Killarney	62	43	58·1	48·7	53·1	+ 3·0	78	0	3	0·42	?	*	*
	Foynes	59	36	56·8	44·4	50·4	+ 1·8	59	0	3	0·16	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	59	47	57·0	50·1	53·5	− 0·6	81	0	1	0·34	−0·53	*	*
	Jersey	61	38	58·7	43·7	51·0	− 2·7	63	0	0	—	−0·99	46	63

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

§ Dew or wet fog.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 43.] *Second Series.* WEEK ENDING MONDAY, 29TH OCTOBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 172.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	64	36	55·9	46·5	51·1	7 above.	64	+39	0	−12	1554	−247	755	+215
	1. SCOTLAND, EAST	67	37	58·4	47·9	53·0	10 above.	77	+47	0	−14	1846	−449	730	+155
	2. ENGLAND, N.E.	66	30	59·0	47·2	52·9	7 above.	76	+45	0	−10	1949	−518	589	+ 89
	3. ENGLAND, EAST	69	26	59·2	44·3	51·5	4 above.	67	+32	0	− 9	2436	−399	730 *	+206
	4. MIDLAND COUNTIES	69	24	59·4	44·3	51·7	5 above.	68	+34	0	−12	2312	−486	731	+201
	5. ENGLAND, SOUTH	70	29	59·4	47·3	53·2	5 above.	78	+36	0	− 7	2577	−433	622	+238
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	62	34	56·3	48·9	52·5	7 above.	74	+41	0	−10	2048	−368	520	+102
	7. ENGLAND, N.W.	65	29	57·3	47·8	52·4	5 above.	73	+38	0	− 7	2178	−399	518	+124
	8. ENGLAND, S.W.	63	28	58·7	50·2	54·3	5 above.	86	+37	0	− 3	2446	−497	506	+268
	9. IRELAND NORTH	64	31	57·7	48·7	53·1	7 above.	78	+43	0	− 8	2220	−281	427	+ 61
	10. IRELAND, SOUTH	67	32	59·2	50·4	54·6	7 above.	88	+44	0	− 6	2551	−282	368	+119
	— CHANNEL ISLANDS	67	38	61·0	50·9	55·8	4 above.	97	+33	0	0	2848	−370	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 172.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	7	26	9 more.	196	+12	33·4	−1·7	2	3	1097	− 49	28	− 1
	1. SCOTLAND, EAST	6	10	2 more.	166	+ 8	23·1	−2·9	13	21	1178	−120	30	− 3
	2. ENGLAND, N.E.	3	2	5 less.	151	− 2	20·9	−1·7	9	13	1038 *	−150	23	− 4
	3. ENGLAND, EAST	3	4	2 less.	155	− 1	20·2	−1·3	15	22	1173	−265	30	− 7
	4. MIDLAND COUNTIES	3	3	4 less.	138	−15	19·2 *	−5·2	13	18	1098	−191	28	− 5
	5. ENGLAND, SOUTH	5	10	3 more.	144	− 2	21·6	−1·2	16	23	1167	−215	30	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	5	22	2 more.	156	−14	32·7	−5·0	5	7	1218	− 31	31	− 1
	7. ENGLAND, N.W.	6	12	2 more.	157	− 1	23·1	−6·7	5	7	1136	−111	29	− 3
	8. ENGLAND, S.W.	5	12	1 more.	160	− 6	26·9	−8·4	8	12	1360	−131	35	− 4
	9. IRELAND, NORTH	6	8	1 less.	167	−21	28·5	−1·0	7	10	1084	− 78	28	− 2
	10. IRELAND, SOUTH	6	16	7 more.	149	−26	28·6	−3·8	7	10	1287	− 43	33	− 1
	— CHANNEL ISLANDS	4	7	3 less.	177	− 3	23·7	−2·9	33	47	1582	−182	41	− 5

General Remarks.

Weather was fair and dry at the commencement of the period, but in the north and west the conditions soon became unsettled and rainy. In the south and south-east, however, fair weather continued until towards the end of the week, when the sky became overcast and considerable quantities of rain fell.

Temperature has been much above the mean in all districts. Over "England, E." and the "Channel Islands" the excess has been 4°, in most of the other English districts 5°, in Ireland, the greater part of Scotland, and in "England, N.E." 7°, and in "Scotland, E." as much as 10°. The highest of the maxima were registered on the 27th, when the thermometer rose to an unusually high level for the time of year. In "England, S." (in London) the maximum was as high as 70°, and in the "Midland Counties" and "England, E." 69°, while in most other parts of the Kingdom readings between 64° and 67° were recorded. The minima were again low over England until the 25th, the sheltered thermometer falling to between 24° and 30°. During the early morning of the 23rd the grass minimum at Ingatestone was as low as 17°. Temperature subsequently rose with great rapidity, and the minimum readings were very high for the time of year. At Shields, York, and Loughborough the thermometer during the night of the 27th—28th did not fall below 60°.

Rainfall has been less than the mean in "Ireland, N.", the "Channel Islands", and over eastern, central, and north-eastern England, but more elsewhere, especially in the extreme west and north.

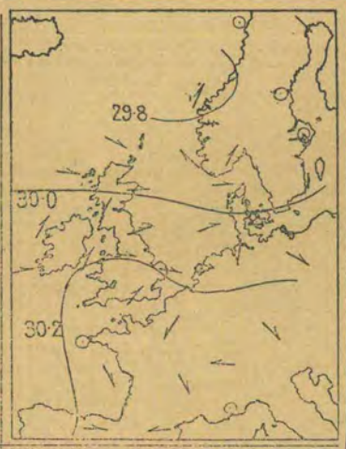
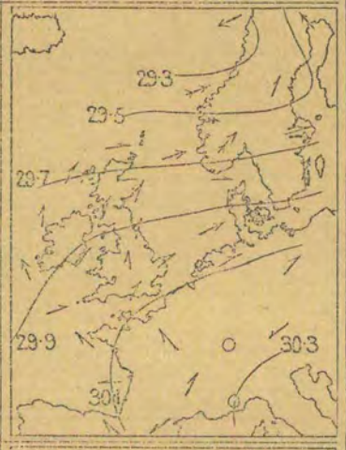
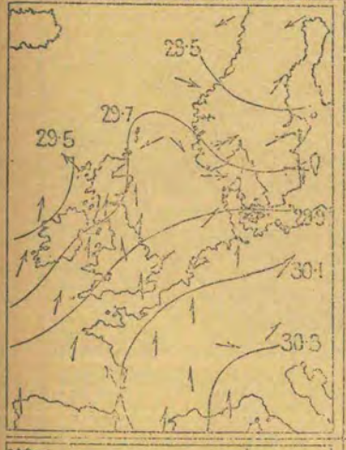
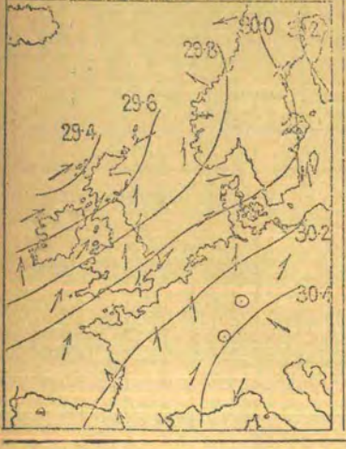
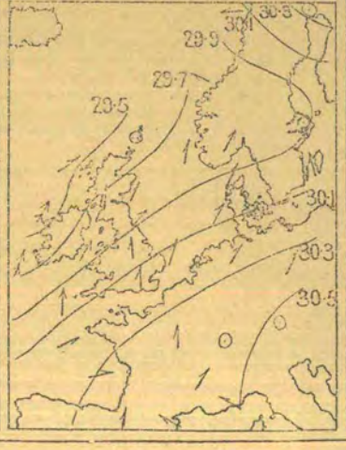
Bright sunshine was very little prevalent except at a few of our extreme southern stations. The percentage of the possible amount of duration ranged from 47 in the "Channel Islands" to 23 in "England, S." and to 22 in "England, E." In Ireland, the north-west of England, and the north and west of Scotland the amount was extremely slight, the percentage of the possible number of hours varying between 3 and 10.

Depressions observed.—At the commencement of the period the anticyclonic conditions continued over our Islands, but subsequently the high pressure area moved in a south-easterly direction and a series of depressions travelled north-eastwards or northwards along our Atlantic coasts. Strong South-Westerly winds, afterwards reaching the force of a strong gale, sprang up over the western and north-western parts of the Kingdom, and moderate to fresh breezes from the Southward or South-Westward elsewhere. In addition to these systems a very deep depression lay over the north of Scandinavia at the end of the period, causing heavy gales from the Westward on the Norwegian coasts.

* These values have been altered owing to the receipt of further information.

A 53134. 350.—11/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

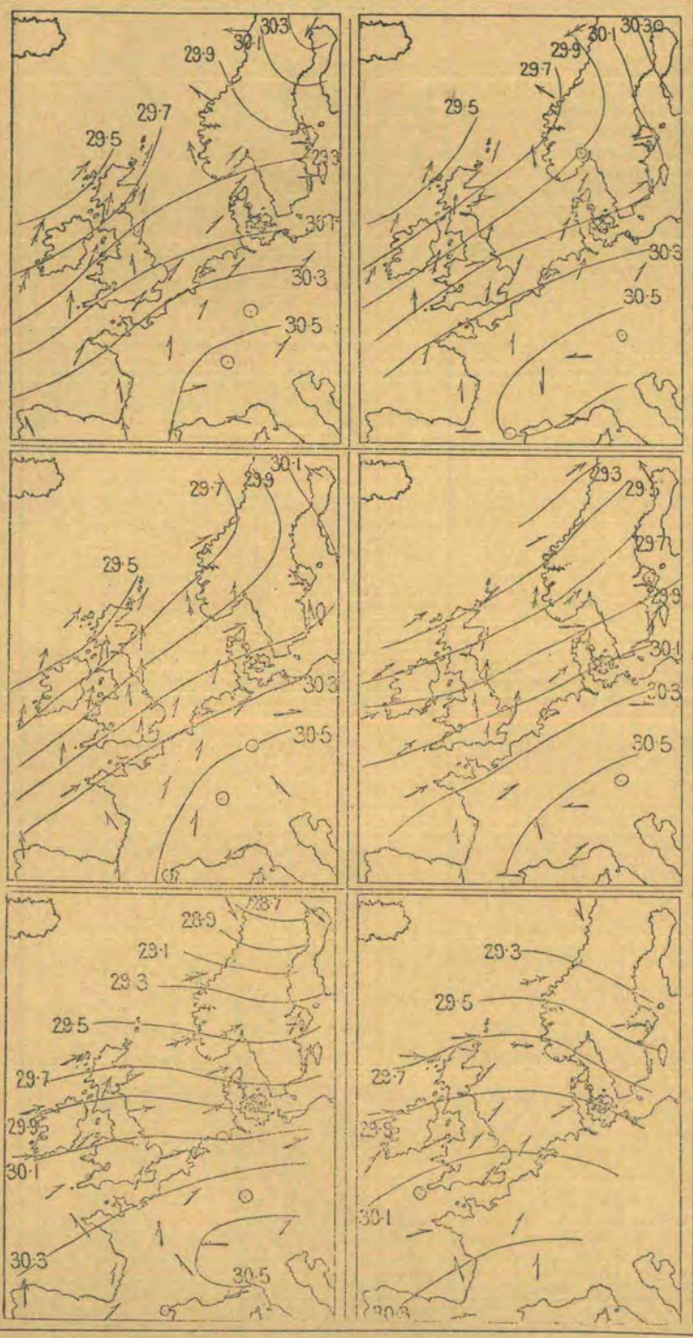
Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, October 23.** *Weather* foggy over England and the central parts of France and Germany, and showery at some of our extreme northern stations, but fair or fine elsewhere. *Temperature* risen several degrees in Scotland and to a less extent on the eastern shores of the North Sea, but fallen elsewhere. Sharp frost occurring over central England in early morning. *Wind* light or moderate from the Eastward over France and the south of our Islands as well as in Norway, but Westerly on our northern coasts. *Sea* moderate to smooth. *Barometer* falling at all but the Swedish and French stations. Large anticyclone lying over England, France, and south Germany, with depression systems in the far north. Fall taking place generally later.	
		**Wednesday, October 24.** *Weather* foggy over England, the Netherlands, and the north-east of France, and rainy on our extreme northern coasts, but fair or fine elsewhere. Rain falling later at some of our western stations. *Temperature* fallen a little over Great Britain, but risen in most other localities. Frost occurring in early morning over the central parts of England, France, and Germany. *Wind* Easterly or South-Easterly in France, but Southerly or South-Westerly elsewhere: light or moderate in force generally in morning, but subsequently increasing to a strong breeze on our extreme western and northern coasts. *Sea* slight or smooth generally. *Barometer* falling at nearly all stations. Anticyclone lying over Switzerland and northern Italy, and well-defined depression off the north-west of Norway. Other disturbances appearing later off our extreme western coasts.	
		**Thursday, October 25.** *Weather* rainy in the north of Scotland and showery at several of our western stations, but fair or fine elsewhere. Heavy rain falling in Shetlands and Hebrides during day, *Temperature* risen at all but our extreme northern stations, rapidly over England. Maximum readings above 60° in many parts of the Kingdom. *Wind* Southerly or South-Easterly in our Islands and France, very strong in force on our extreme western coasts. Strong from the westward in the south of Scandinavia, fresh from East in Lapland. *Sea* rough on most parts of our western coasts. *Barometer* falling at all but the Scandinavian and southern French stations. Anticyclone still lying over Switzerland and Northern Italy, with a large depression over the North of Scandinavia and another to the westward of our Islands. Depression in west subsequently moving slowly northwards.	
		**Friday, October 26.** *Weather* fine in Germany, the Netherlands, and France, but cloudy or overcast elsewhere, with rain in many parts of the United Kingdom and Norway, and snow at Hernösand. Some improvement taking place later in the south-east of England. *Temperature* risen at all but the Scandinavian stations. Maximum readings above 60° generally, highest being 66° at York, Loughborough, and Cambridge. *Wind* Easterly in the north of Scandinavia and South-Easterly in France, but Southerly or South-Westerly elsewhere; strong in force on our western coasts generally, with a gale in the west of Ireland. *Sea* rough on the more exposed parts of our western and northern coasts. *Barometer* rising at all but the Scotch and Norwegian stations. Anticyclone still lying over Switzerland and Northern Italy, with a rather deep depression off the north-west of Scotland. Rise taking place in north later, but fresh depressions appearing off our western coasts.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, October 27.

Weather cloudy over the greater part of our Islands, with rain in the west and north, but fine at most of the Continental stations. Sky clearing later over our midland and south-eastern counties.

Temperature risen at all but the French stations. Minimum readings in early morning considerably above 55° in nearly all parts of the Kingdom. Thermometer subsequently rising to 69° at Loughborough and Cambridge, and 70° in London.

Wind chiefly Southerly and South-Westerly, but Easterly in the north of Scandinavia and the south of France; strong to a gale in force in Ireland and the west of Scotland.

Sea high off the west of Ireland, and rough on our west and north-west coasts generally.

Barometer rising at all but our extreme northern stations. Anticyclone lying over the southern parts of Germany and France, and another over the north of Sweden, with large and rather deep depression to the north-westward of our Islands. Depression subsequently moving slowly northwards.

Sunday, October 28.

Weather fine in France, Germany, the Netherlands, and the south-east of England, but cloudy elsewhere, with rain at most of our western and northern stations. Rain falling generally later, with thunder and lightning in the north of Scotland.

Temperature fallen a little in most places. Maximum readings lower than on previous day, but thermometer rising to 65° in London and at Cambridge, 66° at Cambridge, and 67° at Loughborough.

Wind chiefly Southerly or South-Westerly, but Easterly in the north of Scandinavia and the south of France; strong in force over our Islands, with a gale at many of our western stations.

Sea high on our south-west coasts, and rough, or rather so, in many other localities.

Barometer falling at all but the French and German stations. Anticyclone lying over South Germany and the east of France, with a large and deep depression to the north-westward of our Islands. Depression subsequently moving north-eastwards, and barometer rising again in Ireland.

Monday, October 29.

Weather fine in Denmark, Scotland, the north of England, and the greater part of France, but cloudy elsewhere, with rain at the mouth of the Channel, and passing showers in the north of Ireland. Heavy rain falling later at many of our southern stations.

Temperature fallen generally. Maximum readings over England about 10° lower than on previous day.

Wind chiefly South-Westerly; fresh in force over our Islands, but strong to a gale in Norway. Subsequently shifting to the North-Eastward in the south of England.

Sea high off the Norwegian coasts, and rough on the west coasts of our Islands, but moderate to smooth elsewhere.

Barometer rising in our Islands, but falling at most of the Continental stations. Anticyclone lying over the south-east of France, and deep depression over the north of Norway. Depression subsequently moving eastwards, but shallow disturbances appearing over English Channel.

Synoptic Charts.

TEMPERATURE AND WEATHER at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending Oct. 22	York	—	—	—	—	—	—	—	—	—	—	—	13	18

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	54	36	51·1	42·3	46·6	+ 1·8	32	0	7	1·89	+0·90	*	*
	Stornoway	59	43	55·3	47·1	51·1	+ 6·9	64	0	7	3·50	+2·40	3	5
	Wick	63	43	57·6	46·7	52·0	+ 7·6	70	0	6	0·57	−0·09	*	*
	Lairg	64	40	58·0	46·4	52·0	+ 8·8	70	0	6	1·42	+0·50	*	*
	Glencarron	63	42	55·9	46·7	51·2	+ 7·9	64	0	7	5·06†	?	0	0
	Fort Augustus	62	43	57·2	50·0	53·5	+ 8·7	81	0	6	3·25†	?	*	*
1. SCOTLAND, E.	Nairn	67	40	59·6	49·0	54·1	+ 9·5	85	0	6	0·48	−0·05	*	*
	Aberdeen	64	40	59·4	47·1	53·1	+ 8·5	78	0	5	0·35	−0·33	21	32
	Braemar	61	40	56·6	46·8	51·6	+10·7	67	0	6	1·44	+0·55	9‡	14‡
	Ochtertyre	62	39	58·3	47·9	53·0	+ 8·9	77	0	5	2·61	+1·60	*	*
	Leith	65	42	60·1	50·4	55·1	+10·3	92	0	5	0·23	−0·22	*	*
	Marchmont	60	37	56·1	46·3	51·1	+ 9·2	64	0	6	0·68	−0·10	10	16
2. ENGLAND, N.E.	Alnwick Castle	63	43	57·6	49·9	53·6	+ 8·7	81	0	4	0·25	−0·40	*	*
	Durham	64	30	60·5	45·8	52·9	+ 7·9	76	0	4	0·20	−0·49	8	12
	Shields	66	36	60·0	46·7	53·2	+ 7·3	78	0	3	0·08	−0·48	*	*
	Scarborough	64	36	58·2	47·9	52·9	+ 7·5	76	0	2	0·10	−0·61	9‡	14‡
	York	66	30	60·0	45·1	52·3	+ 5·9	72	0	2	0·19	−0·34	9	13
	Spurn Head	63	39	57·7	47·9	52·7	+ 6·0	75	0	2	0·07	?	*	*
3. ENGLAND, E.	Hillington	68	30	59·9	45·5	52·5	+ 5·7	74	0	3	0·11	−0·49	14	21
	Yarmouth	64	32	56·7	45·0	50·7	+ 2·8	61	0	2	0·23	−0·46	*	*
	Geldeston	67	28	60·1	44·1	51·9	+ 3·9	69	0	2	0·28	−0·33	19	27
	Cambridge	69	27	59·9	43·0	51·2	+ 3·9	64	0	2	0·33	−0·17	18	26
	Rothamsted	66	27	59·5	43·9	51·5	+ 4·8	67	0	3	0·62	−0·07	*	*
	Ingatestone	68	26	58·9	44·1	51·3	+ 3·6	65	0	3	0·72	+0·07	8‡	12‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	65	24	58·6	41·6	49·9	+ 3·1	57	1	3	0·11	−0·52	11‡	17‡
	Loughborough	69	29	62·3	43·9	52·8	+ 6·7	76	0	2	0·21	−0·44	*	*
	Cheadle	62	29	57·2	45·1	51·0	+ 5·7	63	0	4	0·26	−0·56	*	*
	Churchstoke	63	27	59·5	46·0	52·6	+ 6·7	74	0	4	0·65	−0·16	11	16
	Hereford	67	28	59·3	43·9	51·4	+ 4·6	66	0	3	0·21	−0·43	*	*
	Cirencester	65	29	58·3	44·9	51·4	+ 4·5	66	0	4	0·46	−0·25	12	17
	Oxford	67	31	60·7	45·0	52·6	+ 5·6	74	0	3	0·45	−0·15	16	22
5. ENGLAND, S.	London	70	29	60·9	44·9	52·7	+ 4·7	75	0	4	0·70	+0·10	10‡	14‡
	Strathfield Turgiss	67	30	60·3	45·3	52·6	+ 4·8	74	0	5	1·00	+0·39	*	*
	Dungeness	62	30	58·3	47·3	52·6	+ 3·8	74	0	5	0·92	+0·14	*	*
	Hastings (St. Leonard's)	62	42	58·4	49·5	53·8	+ 4·9	83	0	5	1·12	+0·31	31	45
	Southampton	68	35	60·0	49·0	54·3	+ 5·2	86	0	5	1·01	+0·28	14	20
	Hurst Castle	63	31	59·6	48·4	53·8	+ 4·1	83	0	6	1·18	+0·46	*	*
	Stowell	63	33	58·6	47·0	52·6	+ 4·8	74	0	5	1·18	?	9‡	13‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	62	45	58·1	50·5	54·2	+ 8·3	85	0	7	4·37†	+2·51	*	*
	Glasgow	62	44	56·9	49·8	53·3	+ 8·6	79	0	5	1·17	+0·27	3	5
	Ardrossan	57	39	54·6	49·7	51·9	+ 6·5	60	0	5	0·81	−0·14	*	*
	Glenlee	59	38	56·3	45·2	50·6	+ 5·8	60	0	5	2·93	?	*	*
	Douglas (Isle of Man)	57	34	55·7	49·5	52·5	+ 5·7	74	0	5	1·49	+0·49	6	9
7. ENGLAND, N.W.	Newton Reigny (Penrith)	61	29	57·6	44·9	51·1	+ 6·4	64	0	6	2·15	+1·35	7	11
	Barrow-in-Furness	59	39	55·6	48·4	51·9	+ 4·7	69	0	6	1·79	+0·85	*	*
	Stonyhurst	63	33	57·0	48·1	52·4	+ 6·4	73	0	6	0·77	−0·43	4	5
	Blackpool	62	33	56·8	47·1	51·8	+ 3·9	69	0	5	1·23	+0·28	3	4
	Manchester	64	30	58·0	47·0	52·3	+ 5·7	72	0	6	0·54	−0·39	*	*
	Liverpool Obsy (Bidston)	65	33	59·4	47·4	53·2	+ 5·4	78	0	6	0·34	−0·45	*	*
	Llandudno													
	Holyhead	59	42	56·9	51·4	54·1	+ 4·5	85	0	6	1·38	+0·39	*	*
8. ENGLAND, S.W.	Llandovery	63	28	60·0	47·7	53·7	+ 5·4	82	0	6	1·98	+0·73	*	*
	Pembroke	58	43	56·7	51·9	54·2	+ 3·7	85	0	6	0·63	−0·30	7	10
	Arlington (N. Devon)	62	39	58·6	48·9	53·6	+ 5·8	81	0	4	0·84	−0·51	*	*
	Cullompton	63	34	59·8	48·5	54·0	+ 5·7	84	0	5	0·97	+0·09	6	9
	Falmouth	62	46	58·9	52·7	55·7	+ 5·0	96	0	5	1·34	+0·08	10	14
	Plymouth	60	42	58·8	51·0	54·8	+ 4·8	90	0	4	1·38	+0·53	9	13
	Prawle Point	60	45	58·0	51·0	54·4	+ 4·0	87	0	5	1·44	?	*	*
9. IRELAND, N.	Malin Head	64	44	58·0	50·0	53·9	+ 7·6	83	0	4	0·54	?	*	*
	Londonderry	65	39	58·4	49·0	53·6	+ 7·8	81	0	7	0·94	−0·05	*	*
	Mullaghmore	64	41	59·6	49·4	54·4	+ 8·4	87	0	6	0·62	−0·38	*	*
	Belmullet	60	46	57·4	51·7	54·5	+ 5·5	88	0	7	1·35	?	*	*
	Markree Castle	62	31	57·1	46·8	51·8	+ 6·4	69	0	6	1·21	+0·36	8	12
	Brookeborough	63	34	56·4	47·5	51·8	+ 6·9	69	0	6	0·76	?	*	*
	Armagh	64	38	57·9	49·0	53·3	+ 7·7	79	0	5	0·51	−0·16	5	7
	Donaghadee	60	40	57·1	47·9	52·4	+ 4·3	73	0	6	0·30	−0·45	*	*
	Edgeworthstown	64	31	57·7	46·9	52·1	+ 6·9	71	0	6	0·78	+0·05	*	*
10. IRELAND, S.	Dublin	67	33	60·4	49·8	54·9	+ 7·8	90	0	5	0·60	−0·08	11	17
	Parsonstown	64	33	58·6	47·4	52·8	+ 6·9	76	0	6	0·51	−0·19	7	11
	Kilkenny	62	36	58·7	49·4	53·9	+ 7·4	83	0	6	1·61	+0·94	*	*
	Waterford	59	32	57·7	47·4	52·4	+ 3·3	73	0	6	1·96	+1·03	*	*
	Roche's Point	59	45	57·6	52·4	54·8	+ 5·0	90	0	7	2·60	+1·65	*	*
	Valencia	63	46	60·1	53·3	56·6	+ 6·3	102	0	7	1·11	−0·25	2	3
	Killarney	63	38	60·1	52·4	55·1	+ 7·3	99	0	6	3·48	?	*	*
	Foynes	64	40	60·0	51·2	55·5	+ 8·6	95	0	6	0·75	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	62	52	59·9	54·1	56·9	+ 4·4	104	0	5	0·79	−0·09	*	*
	Jersey	67	38	62·1	47·7	54·7	+ 2·7	89	0	3	0·59	−0·49	33	47

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 44.] *Second Series.* WEEK ENDING MONDAY, 5TH NOVEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 176.)	Observed during the Week. Highest.	Observed during the Week. Lowest.	Averages of Daily Maxima.	Averages of Daily Minima.	Averages of Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	For the Week. Difference from Mean.	For the Week. Below 42°	For the Week. Difference from Mean.	From January 3, 1888. Above 42°.	From January 3, 1888. Difference from Mean.	From January 3, 1888. Below 42°.	From January 3, 1888. Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	54	33	47·4	39·5	43·3	1 above.	20	0	7	− 9	1574	−246	762	+208
	1. SCOTLAND, EAST	58	33	48·5	40·6	44·5	2 above.	23	6	4	−14	1869	−448	734	+144
	2. ENGLAND, N.E.	55	36	49·7	43·5	43·5	3 above.	32	+ 8	0	−13	1981	−513	589	+ 79
	3. ENGLAND, EAST	57	38	51·1	44·2	47·5	2 above.	39	+11	0	−13	2475	−391	730	+197
	4. MIDLAND COUNTIES	58	35	51·1	42·4	46·7	2 above.	33	+ 6	0	−16	2345	−481	731	+189
	5. ENGLAND, SOUTH	58	37	53·4	45·0	49·1	3 above.	50	+15	0	−10	2627	−480	622	+230
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	59	33	49·6	42·8	46·1	3 above.	29	+ 3	0	−13	2077	−367	529	+ 93
	7. ENGLAND, N.W.	56	38	51·2	45·0	48·0	2 above.	42	+14	0	−10	2227 *	−380	518	+116
	8. ENGLAND, S.W.	56	34	52·7	43·9	48·1	1 above.	43	0	0	− 5	2489	−500	506	+265
	9. IRELAND, NORTH	55	34	51·0	43·5	47·2	2 above.	36	+ 6	0	−10	2256	−275	427	+ 55
	10. IRELAND, SOUTH	62	36	52·8	43·8	48·2	1 above.	43	+ 5	0	− 8	2594	−279	368	+113
	— CHANNEL ISLANDS	61	41	55·5	48·5	51·9	2 above.	69	+13	0	0	2917	−358	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 176.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	5	7	4 less.	201	+11	34·1	−2·0	18	29	1115	− 42	28	0
	1. SCOTLAND, EAST	6	10	3 more.	172	+10	24·1	−2·6	5	7	1183	−139	30	− 2
	2. ENGLAND, N.E.	5	13	6 more.	156	− 1	22·2	−1·0	5	8	1043	−155	26	− 4
	3. ENGLAND, EAST	5	12	6 more.	160	− 1	21·4	−0·7	6	9	1179	−274	30	− 7
	4. MIDLAND COUNTIES	6	17	10 more.	144	−13	20·8 *	−4·2	6	10	1104	−198	28	− 5
	5. ENGLAND, SOUTH	6	16	9 more.	150	0	23·2	−0·3	8	13	1175	−222	30	− 5
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	4	9	2 less.	160	−14	33·6	−5·2	8	12	1226	− 36	31	− 1
	7. ENGLAND, N.W.	6	11	2 more.	163	0	24·1 *	−6·6	6	10	1146 *	−114	29	− 3
	8. ENGLAND, S.W.	7	18	7 more.	167	− 5	28·7	−7·6	11	17	1371	−135	35	− 3
	9. IRELAND, NORTH	6	9	0 (average).	173	−20	29·4	−1·0	16	25	1100	− 76	28	− 2
	10. IRELAND, SOUTH	6	11	2 more.	155	−25	29·7	−3·6	19	28	1306	− 42	33	− 1
	— CHANNEL ISLANDS	7	18	9 more.	184	− 1	25·5	−2·0	10	15	1592	−190	40	− 5

General Remarks.

Weather has been very dull and unsettled in all parts of the Kingdom, with much rain over England and a considerable quantity over Ireland and Scotland. In the Metropolis a dense black fog was experienced for a time on November 1st, and again during the morning of the 3rd.

Temperature has been above the mean in all districts; in "England, N.E.", "England, S.", and "Scotland, W." the excess has been 3°, and in the other districts 1° or 2°. The highest of the maxima, which were generally recorded during the earlier days of the period, ranged from 54° in "Scotland, N." to 59° in "Scotland, W.", 61° in the "Channel Islands", and 62° in "Ireland, S." The lowest of the minima were registered on the 1st, when they varied from 33° over Scotland to 38° in "England, E." and "England, N.W.", and to 41° in the "Channel Islands".

Rainfall has been rather less than the mean in "Scotland, N." and "Scotland, W." and about equal to it in "Ireland, N.", but in all other districts an excess is shown, especially over central, southern, and eastern England.

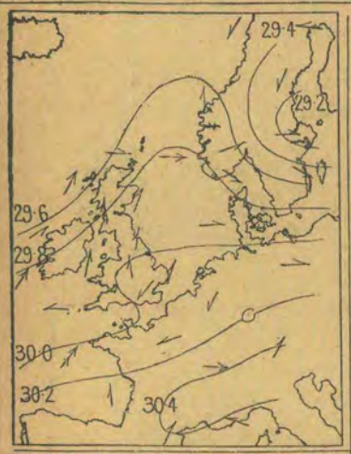
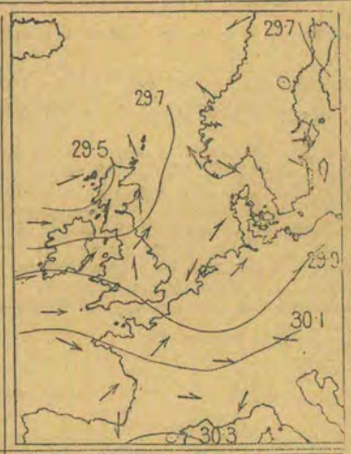
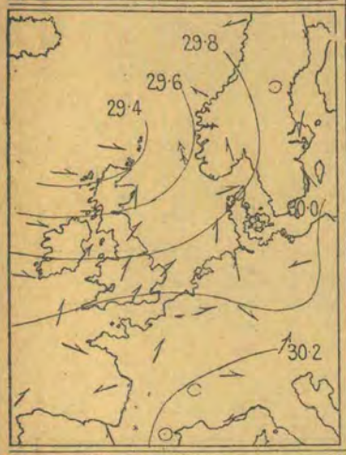
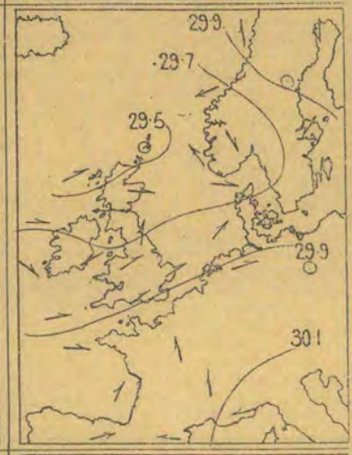
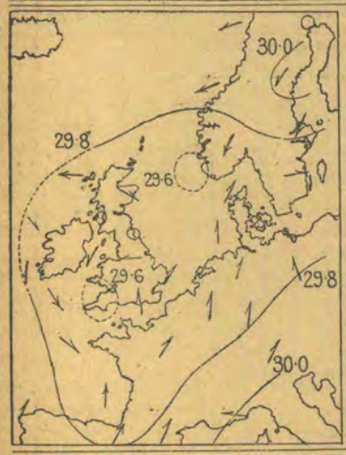
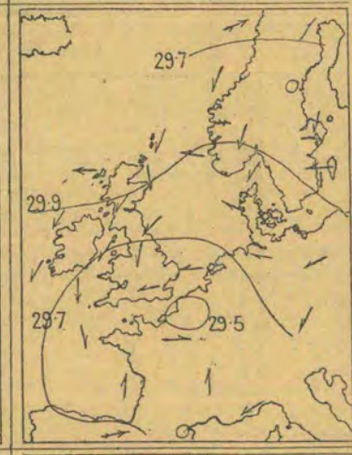
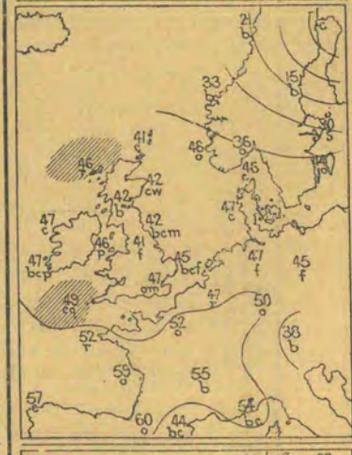
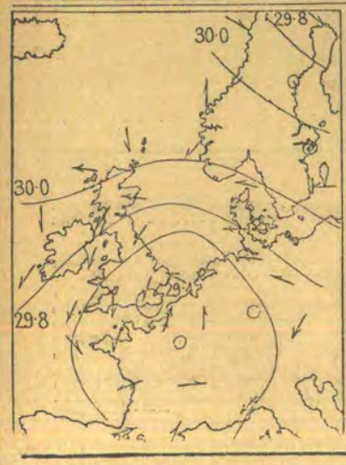
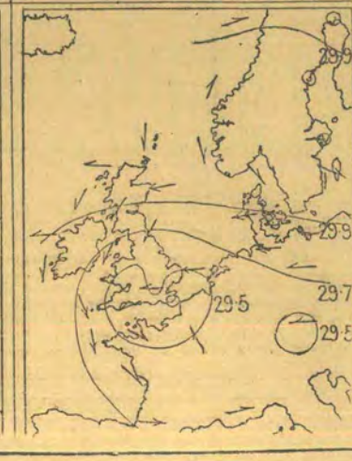
Bright sunshine shows a slight increase in the "Grazing Districts" and in the extreme north of Scotland, but has again been very deficient generally. In most parts of England and Scotland, and also in the "Channel Islands", the percentage of the possible amount of duration has not exceeded 15; but in Ireland it has ranged from 25 to 28, while in "Scotland, N." 29 % has been recorded.

Depressions observed.—During the earlier days of this period depressions were shown over Scandinavia and off our north-western coasts, while a small subsidiary disturbance developed over the English Channel and passed east north eastwards to Germany. By November 1st, a large and irregularly formed low pressure system covered nearly the whole of our Islands and the North Sea, while the barometer had become high over the north of Sweden. This low pressure system moved southwards and finally formed a long band of low readings stretching from central Germany to the south of Ireland. By the 4th this system had disappeared, but another depression lay off our south-west coasts, and at the end of the period was growing deeper. Fresh South-Westerly winds were generally experienced over our Islands until the 1st, when North-Easterly winds, subsequently increasing to a gale in the north and north-east, set in on nearly all our coasts. At the close of the week strong South-Easterly or Easterly winds were prevalent.

* These values have been altered slightly owing to the receipt of some arrears of observations.

A 56238. 350.—11/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

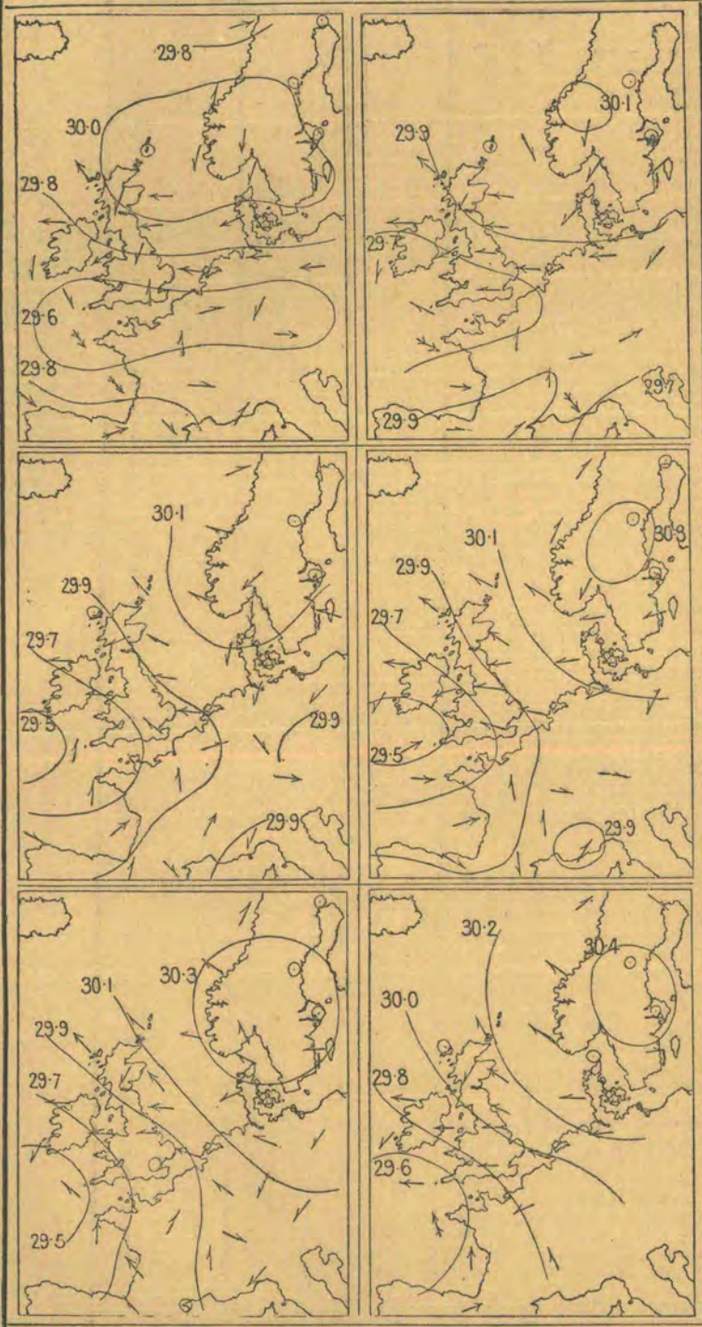
Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, October 30.** *Weather* fair over the greater part of Ireland and Scotland, as well as in Denmark and the south of France, but rainy over England, Belgium, and the north of France, with fog or mist in many places. Some improvement taking place in south of England later. *Temperature* risen at all but the English and Scandinavian stations. Maximum readings below 55° on all but our extreme south-western and southern coasts. *Wind* light Easterly or North-Easterly over Belgium and the south of England, but fresh South-Westerly in most other parts of Western Europe. Subsequently shifting to the Westward in the south of England. *Sea* very high off the north-west of France, and rough on many parts of our own western and northern coasts. *Barometer* falling generally. Anticyclone lying over Switzerland and the south of France, with a deep depression over the Gulf of Bothnia, another disturbance off the north-west of Scotland, and a small secondary system over the English Channel. Small depression subsequently moving away to the Netherlands.	
		**Wednesday, October 31.** *Weather* fine in the north of Scandinavia and the east and south of England, but cloudy elsewhere, with rain in Denmark and Germany, and showers on our west coasts. Solar halos seen during day in south of England. *Temperature* risen slightly over England and the south of France, but fallen elsewhere. Maximum readings a little higher than on previous day. *Wind* light to fresh from the South-Westward over our Islands and the North Sea, but South-Easterly in Norway and also in the south-west of France. *Sea* rough on the west coasts of our Islands and France, but moderate to smooth elsewhere. *Barometer* rising over the greater part of our Islands and also in Sweden, but falling elsewhere. Anticyclone lying over the southern parts of Germany and France, with a large depression off the north of Scotland. Fall taking place later over France and the south of our Islands.	
		**Thursday, November 1.** *Weather* fine in the north of Scandinavia and the south of France, but cloudy elsewhere, with fog over England, the Netherlands, and North Germany, showers on our western coasts, and rain in the north-west and north-east of France. *Temperature* fallen generally. Maximum readings below 50° over the more central parts of our Islands. *Wind* North-Easterly in Scandinavia and the extreme north of Scotland, and Northerly or North-Westerly in the west, but chiefly Southerly elsewhere; light to fresh in force generally. North-Easterly winds subsequently extending over the whole of the United Kingdom. *Sea* rough at Stornoway and rather rough at Scilly, but moderate to smooth elsewhere. *Barometer* rising in Scandinavia and the north of our Islands, but falling elsewhere. Large area of low pressure, with several distinct minima lying directly over our Islands and the North Sea. Systems subsequently moving southwards, and barometer rising at all but our extreme southern stations.	
		**Friday, November 2.** *Weather* very rainy at the English and French stations, and foggy in Germany, but fair or fine elsewhere. *Temperature* risen over Scandinavia and the north of our Islands, but fallen elsewhere. Maximum readings very similar to those of previous day. *Wind* North-Easterly over the greater part of our Islands, and strong in force on our eastern and western coasts, but light or moderate from the westward in the north of Scandinavia and south of France. *Sea* rough on our north and east coasts, and rather rough at Holyhead and Biarritz, but moderate to smooth elsewhere. *Barometer* rising at all but our extreme southern and the French stations. Low pressure system of previous day now lying over France and the south-east of England. Fall taking place later on our western and some parts of our northern coasts.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, November 3.

Weather dull generally, with rain at many of the English stations as well as in the Netherlands and South Germany. Some improvement taking place in south of England later.

Temperature changed little and irregularly. Maximum readings a little above 50° in most parts of England and Ireland.

Wind very strong from the Eastward or South-Eastward, over the North Sea and the northern parts of our Islands, and light from the North-East in the south of England. Moderate Northerly breezes reported in the south of Ireland and fresh Westerly gales in the west of France.

Sea very rough on our eastern and rather rough on exposed parts of our western coasts.

Barometer fallen in the west and north of our Islands, but risen elsewhere. Large anticyclone lying over Scandinavia and the northern parts of the North Sea, with a trough of low pressure over the south of England, the north of France, the Netherlands, and Germany. Low pressure system subsequently moving westwards.

Sunday, November 4.

Weather fine in the southern parts of our Islands and France, but cloudy elsewhere, with rain in the north of Ireland and west of France. Rain falling later in many parts of Western Europe,—heavily in the south-west of England.

Temperature risen a little in the south-west of our Islands and the west of France, but fallen elsewhere. Maximum readings below 50° in all the more northern parts of the United Kingdom.

Wind moderate Southerly in France and the south of England, but fresh Easterly or South-Easterly winds over the more northern parts of our Islands and moderate North-Easterly breezes on the eastern shores of the North Sea.

Sea rough off the east of England, and rather rough on several parts of our northern and southern coasts.

Barometer falling on the west coasts of our Islands and France, but rising elsewhere. Anticyclone lying over the north of Sweden, with a well defined depression to the south-westward of our Islands. Fall extending later to all parts of the United Kingdom.

Monday, November 5.

Weather fine in Sweden, Germany, and the south-east of England, but cloudy or overcast elsewhere, with showers in many parts of the United Kingdom. Lightning seen in the south-west of England at night.

Temperature fallen in Sweden, Germany, and the west of France, but risen slightly elsewhere. Maximum readings below 50° at most of our northern stations.

Wind moderate North-Easterly in Germany, but strong from East or South-East in our Islands, and from South in France. Calm in Sweden.

Sea rough on our north and east coasts, and also over the Bay of Biscay, but moderate elsewhere.

Barometer rising at all but the French stations. Large anticyclone lying over Scandinavia, with a well marked and rather deep depression off our south-west coasts. Fall taking place later in France and the south-west of England.

Synoptic Charts.

TEMPERATURE AND WEATHER at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending Oct. 15	Llandudno	64	40	55·6	44·8	50·0	− 3·2	56	0	2	0·20	−0·69	19	25
„ „ 22	„	64	39	58·5	42·5	50·3	− 0·4	58	0	0	—	−0·90	35	50
„ „ 29	„	66	38	60·9	50·5	55·6	+ 6·4	95	0	4	0·51	−0·36	6	9

III.—DATA from which the SUMMARY on page 173 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.	*	*
0. SCOTLAND, N.	Sumburgh Head	51	35	46·4	38·9	42·5	− 1·0	17	9	6	0·74	−0·25	*	*
	Stornoway	51	33	48·7	38·1	43·2	+ 0·1	25	11	3	0·30	−0·80	23	38
	Wick	50	39	47·0	40·4	43·6	+ 0·6	18	4	5	0·23	−0·45	*	*
	Lairg ℳ	51	36	45·4	38·3	41·8	0·0	10	15	5	0·64	−0·27	*	*
	Glencarron ℳ	54	37	47·1	39·0	42·9	+ 1·2	19	8	4	1·20†	?	13	20
	Fort Augustus ℳ	53	39	49·5	42·2	45·7	+ 2·6	26	0	4	1·18†	?	*	*
1. SCOTLAND, E.	Nairn	55	38	48·9	40·4	44·5	+ 1·9	24	4	4	0·69	+0·16	*	*
	Aberdeen	53	38	48·4	41·9	45·1	+ 2·2	22	0	5	0·38	−0·32	10	16
	Braemar ℳ									7	0·44	−0·46	1‡	1‡
	Ochtertyre ℳ	56	33	48·7	40·3	44·4	+ 1·1	24	5	6	0·55	−0·45	*	*
	Leith	58	38	50·4	41·6	45·9	+ 3·1	29	1	5	1·08	+0·61	*	*
	Marchmont ℳ	50	33	46·3	38·7	42·4	+ 2·3	17	9	6	2·70	+1·91	3	5
2. ENGLAND, N.E.	Alnwick Castle	51	36	47·6	42·4	44·9	+ 1·5	20	0	5	1·64	+0·94	*	*
	Durham	54	39	48·9	42·5	45·6	+ 2·5	25	0	5	1·69	+1·00	8	13
	Shields	55	41	50·3	43·9	47·0	+ 2·6	35	0	4	1·22	+0·62	*	*
	Scarborough ℳ	53	41	50·3	44·4	47 3	+ 3·6	37	0	6	1·47	+0·75	3‡	5‡
	York	55	40	51·1	42·7	46·8	+ 3·1	34	0	6	1·10	+0·58	4	7
	Spurn Head	55	42	50·1	45·1	47·5	+ 2·4	39	0	6	0·35	?	*	*
3. ENGLAND, E.	Hillington ℳ	53	38	50·5	43·7	47·0	+ 2·0	35	0	5	0·69	+0·07	6	10
	Yarmouth	52	43	50·1	45·0	47·5	+ 1·6	39	0	5	0·94	+0·24	*	*
	Geldeston	54	39	51·0	44·5	47·7	+ 1·8	40	0	5	1·11	+0·59	4	6
	Cambridge	57	38	52·6	43·4	47·9	+ 2·6	41	0	4	1·22	+0·73	8	12
	Rothamsted	54	43	51·1	44·2	47·6	+ 2·8	39	0	7	2·19	+1·53	*	*
	Ingatestone												‡	‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	56	37	51·4	40·7	45·9	+ 0·8	33	4	6	1·58	+1·00	5‡	8‡
	Loughborough	56	41	51·6	44·4	47·9	+ 4·0	41	0	5	0·87	+0·18	*	*
	Cheadle	53	40	49·8	42·6	46·1	+ 2·6	29	0	5	1·55	+0·78	*	*
	Churchstoke ℳ	58	37	50·7	42·5	46·5	+ 2·8	32	0	6	2·15	+1·35	8	13
	Hereford ℳ	57	39	51·9	43·1	47·4	+ 2·6	38	0	7	2·52	+1·92	*	*
	Cirencester	53	35	?50·7	?40·4	?45·4	+?0·6	?31	?4	6	1·48	+0·77	5	7
	Oxford	54	40	51·7	43·3	47·4	+ 2·6	38	0	5	1·65	+1·07	7	11
5. ENGLAND, S.	London	56	43	52·9	45·0	48·8	+ 3·2	48	0	5	1·91	+1·35	4‡	6‡
	Strathfield Turgiss ℳ	56	37	52·6	40·8	46·5	+ 1·0	37	3	5	1·33	+0·73	*	*
	Dungeness	58	45	54·3	48·0	51·1	+ 4·4	64	0	5	1·80	+1·01	*	*
	Hastings (St. Leonard's)	58	45	54·5	46·9	50·6	+ 3·7	60	0	6	1·89	+1·09	10	15
	Southampton	57	41	54·1	44·2	49·0	+ 1·9	49	0	5	1·22	+0·53	7	10
	Hurst Castle	56	45	54·3	48·0	51·1	+ 3·2	64	0	6	1·24	+0·54	*	*
	Stowell ℳ	54	38	51·4	42·1	46·6	+ 0·8	32	0	7	1·45	?	12‡	19‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	59	38	49·8	43·1	46·4	+ 2·0	31	0	3	1·23†	−0·84	*	*
	Glasgow	54	34	48·6	41·9	45·1	+ 3·3	22	0	5	0·39	−0·49	6	10
	Ardrossan	54	39	49·6	43·1	46·1	+ 2·5	29	0	3	0·34	−0·60	*	*
	Glenlee S	53	33	49·2	41·5	45·2	+ 2·9	25	1	5	0·71	?	*	*
	Douglas (Isle of Man)	53	41	50·9	44·6	47·7	+ 3·1	40	0	4	1·67	+0·65	9	14
7. ENGLAND, N.W.	Newton Reigny (Penrith)	53	38	49·1	41·6	45·2	+ 2·4	24	1	5	0·41	−0·39	3	5
	Barrow-in-Furness	56	44	52·0	45·7	48·8	+ 3·4	48	0	4	1·52	+0·58	*	*
	Stonyhurst	53	42	50·1	43·7	46·8	+ 2·6	34	0	6	0·82	−0·34	5	8
	Blackpool ℳ	53	42	50·7	44·7	47·6	+ 1·4	39	0	5	1·48	+0·59	5	8
	Manchester	55	42	51·2	44·7	47·9	+ 3·1	41	0	6	0·61	−0·28	*	*
	Liverpool Obsy (Bidston)	55	43	52·0	45·3	48·6	+ 2·5	46	0	6	1·38	+0·63	*	*
	Llandudno ℳ	55	43	52·2	46·6	49·3	+ 1·9	51	0	6	1·32	+0·48	12	19
	Holyhead	54	45	52·6	47·7	50·1	+ 2·2	57	0	6	0·93	−0·02	*	*
8. ENGLAND, S.W.	Llandovery	56	36	52·9	40·1	46·3	− 0·2	38	5	7	1·57	+0·36	*	*
	Pembroke	55	44	52·4	47·3	49·8	+ 1·2	55	0	7	0·85	−0·08	11	18
	Arlington (N. Devon)	54	41	51·4	43·6	47·1	+ 1·4	36	0	7	2·66	+1·27	*	*
	Cullompton ℳ	56	34	53·2	41·4	47·1	+ 0·8	38	2	7	1·42	+0·57	5	7
	Falmouth	56	43	53·4	44·6	48·9	− 0·1	48	0	5	1·78	+0·51	17	26
	Plymouth	55	41	52·4	45·1	48·6	+ 0·2	46	0	7	1·91	+1·07	11	16
	Prawle Point	55	41	52·9	45·0	48·8	− 0·1	48	0	7	2·03	?	*	*
9. IRELAND, N.	Malin Head	53	43	50·3	45·1	47·6	+ 2·6	39	0	5	0·75	?	*	*
	Londonderry	53	39	50·5	42·5	46·4	+ 2·1	31	0	5	0·86	−0·14	*	*
	Mullaghmore	53	44	51·4	46·1	48·7	+ 4·0	47	0	5	1·42	+0·35	*	*
	Belmullet	54	42	52·0	45·7	48·8	+ 1·2	48	0	6	1·05	?	*	*
	Markree Castle	54	39	51·6	43·2	47·1	+ 3·1	36	0	7	0·55	−0·28	17	27
	Brookeborough	55	34	50·7	40·7	45·6	+ 2·3	31	4	5	0·67	?	*	*
	Armagh	54	35	50·7	42·5	46·5	+ 2·4	32	0	5	0·88	+0·23	14	22
	Donaghadee	53	40	51·3	44·3	47·7	+ 1·3	40	0	7	1·07	+0·32	*	*
	Edgeworthstown	53	37	50·9	41·6	46·1	+ 2·3	30	1	5	0·80	+0·01	*	*
10. IRELAND, S.	Dublin	56	43	52·0	46·1	49·0	+ 3·5	49	0	6	1·59	+0·98	13	19
	Parsonstown	62	36	53·1	42·1	47·4	+ 3·0	38	0	5	0·64	−0·05	16	25
	Kilkenny	56	38	52·4	42·9	47·5	+ 2·7	39	0	6	0·73	+0·09	*	*
	Waterford	57	36	53·1	42·4	47·6	+ 0·1	39	0	7	0·87	−0·06	*	*
	Roche's Point	57	42	54·1	45·9	49·9	+ 1·6	55	0	6	1·73	+0·74	*	*
	Valencia	56	42	54·0	45·6	49·7	+ 0·7	54	0	5	0·59	−0·72	27	41
	Killarney	55	38	52·3	41·6	46·8	+ 0·8	35	1	5	0·73	?	*	*
	Foynes	54	40	51·5	43·4	47·3	+ 2·0	37	0	7	1·54	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	59	45	55·1	48·6	51·8	+ 0·8	69	0	7	1·32	+0·44	*	*
	Jersey	61	41	55·9	48·4	52·0	+ 2·1	70	0	7	2·32	+1·33	10	15

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 45.] *Second Series.* WEEK ENDING MONDAY, 12TH NOVEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 180.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	53	32	46·8	39·1	43·0	1 above.	19	+ 3	8	−11	1593	−248	770	+198
	1. SCOTLAND, EAST	51	32	45·2	39·0	42·1	2 above.	13	− 5	8	−14	1882	−450	742	+132
	2. ENGLAND, N.E.	55	34	45·2	39·3	42·3	0 (average).	13	− 7	8	− 9	1994	−524	597	+ 71
	3. ENGLAND, EAST	52	32	44·7	37·2	41·0	3 below.	8	−15	19	+ 2	2483	−411	749	+198
	4. MIDLAND COUNTIES	53	32	44·7	36·6	40·7	2 below.	8	−14	21	0	2353	−501	752	+191
	5. ENGLAND, SOUTH	56	31	47·7	39·5	43·6	1 below.	22	− 7	7	− 6	2649	−494	629	+226
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	54	34	47·4	39·5	43·5	2 above.	21	− 1	7	− 9	2098	−374	527	+ 87
	7. ENGLAND, N.W.	57	30	45·7	38·0	41·9	3 below.	10	−14	17	+ 4	2237	−399	535	+122
	8. ENGLAND, S.W.	58	32	51·3	41·7	46·5	1 above.	33	− 4	1	− 6	2522	−509	507	+ 263
	9. IRELAND NORTH	57	34	49·0	41·4	45·2	2 above.	25	0	2	−11	2281	−281	429	+ 45
	10. IRELAND, SOUTH	57	37	52·0	43·8	47·9	3 above.	41	+ 7	0	−10	2635	−279	368	+104
	— CHANNEL ISLANDS	58	42	55·1	47·5	51·3	2 above.	65	+15	0	0	2982	−349	247	+154

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 180.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	2	1	8 less.	203	+ 7	34·2	−3·0	20	35	1135	− 35	28	− 1
	1. SCOTLAND, EAST	3	7	0 (average).	175	+ 9	24·8	−2·6	3	5	1186	−145	29	− 4
	2. ENGLAND, N.E.	2	9	2 more.	158	− 2	23·1	−0·8	15	24	1058	−153	23	− 4
	3. ENGLAND, EAST	3	5	1 less.	163	− 2	21·9	−0·9	13	20	1192	−281	30	− 7
	4. MIDLAND COUNTIES	4	15	9 more.	148	−12	22·3	−3·4	3	5	1107	−210	28	− 5
	5. ENGLAND, SOUTH	5	13	6 more.	155	+ 2	24·5	+0·3	5	8	1180	−233	29	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	4	13	1 more.	164	−14	34·9	−4·8	9	14	1235	− 39	30	− 1
	7. ENGLAND, N.W.	4	12	3 more.	167	0	25·3	−6·3	10	16	1156	−116	29	− 3
	8. ENGLAND, S.W.	6	26	15 more.	173	− 3	31·3	−6·1	10	15	1381	−139	34	− 4
	9. IRELAND, NORTH	5	9	0 (average).	178	−20	30·3	−0·9	9	15	1109	− 82	27	− 2
	10. IRELAND, SOUTH	6	18	9 more.	161	−23	31·5	−2·6	7	11	1313	− 51	33	− 1
	— CHANNEL ISLANDS	7	16	7 more.	191	+ 1	27·1	−1·3	5	8	1597	−202	40	− 5

General Remarks.

Weather has continued very cloudy or dull in almost all parts of the Kingdom. In the extreme north of Scotland, however, it has been fair, with scarcely any rain; but in most parts of England and Ireland very heavy rain fell during the latter part of the period, and the conditions were rough and squally generally.

Temperature has been rather above the mean over Ireland, Scotland, the "Channel Islands", and "England, S.W.", but a little below it over the greater part of England. The highest of the maxima, which were registered in most places on the 12th, ranged from 51° in "Scotland, E." to 58° in "England, S.W." and the "Channel Islands". During the earlier days of the period the daily maxima were low over central and south-eastern England, the highest readings on the 7th varying between 36° and 38°. The lowest of the minima were generally recorded either on the 7th or 8th, when they ranged from 30° in "England, N.W." to 34° in "England, N.E.", "Scotland, W.", and "Ireland, N.", to 37° in "Ireland, S.", and to 42° in the "Channel Islands".

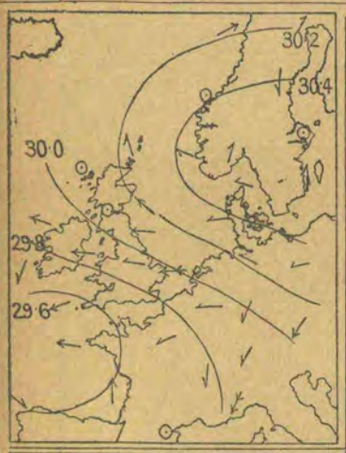
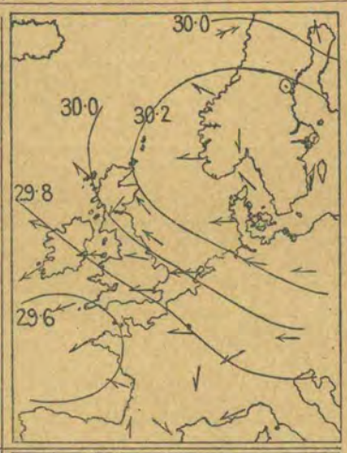
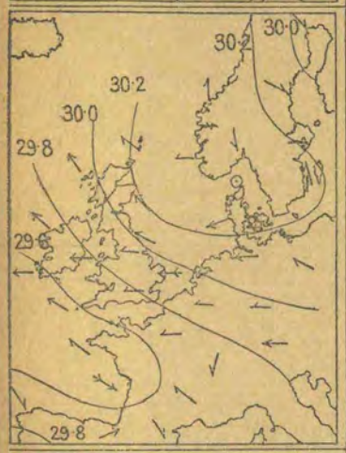
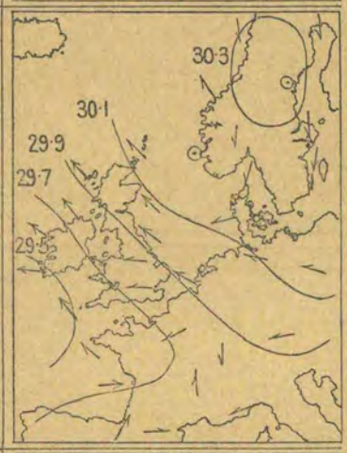
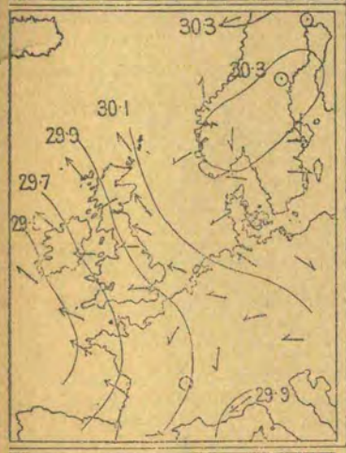
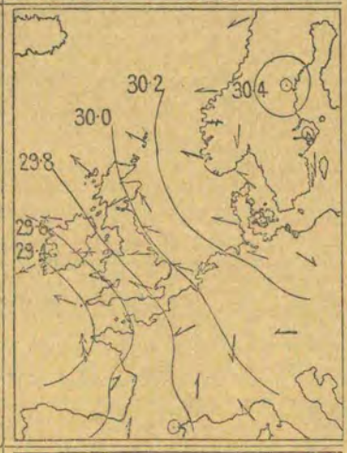
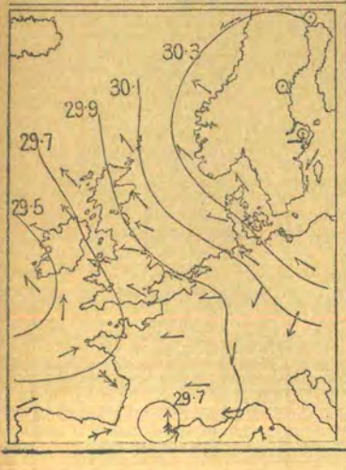
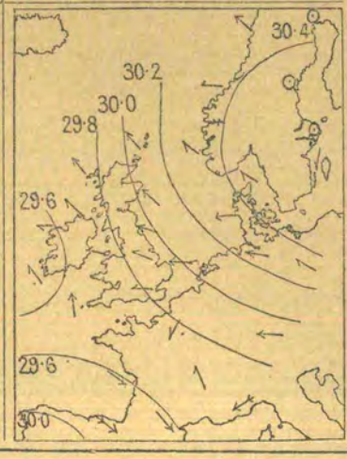
Rainfall has been much less than the mean in "Scotland, N." and rather less in "England, E.", but in nearly all other districts a very considerable excess is shown. Over central and south-western England the fall has been more than twice as much as the average value. At Cullompton the fall during the 8th amounted to 2·23 ins.

Bright sunshine has again been very little prevalent excepting in "Scotland, N." The percentage of the possible amount of duration ranged from 5 to 24 over the Kingdom generally, but in "Scotland, N." it was 35.

Depressions observed.—During the earlier part of the period depressions continued to approach our south-western coasts and some subsidiary disturbances at the same time moved eastwards over France; but as the week progressed the depressions travelled northwards outside our extreme western coasts, and the gradients over our Islands became steeper and favourable for winds from a more Southerly point. Strong winds or gales were experienced generally,—from the Eastward or South-Eastward during the first part of the time, but subsequently from South-South-East or South. In the south-eastern districts, however, the Southerly winds which set in during the closing days were moderate or fresh in force.

A 56338. 350.—11/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

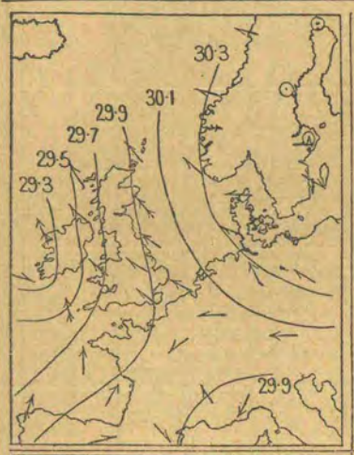
Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, November 6.** *Weather* fine in Germany, Belgium, and the north and east of England, but cloudy or overcast elsewhere, with rain in the south of England and north of France. *Temperature* fallen generally, quickly in Germany, Belgium, and the south-east of England. Maximum readings below 45° at several of our south-eastern stations. *Wind* Southerly in the south of France and South-Westerly in the north of Scandinavia, but Easterly or South-Easterly elsewhere; strong in force in most places, with a gale in the east and south of England. Gale extending later to our north-west coasts. *Sea* high or rough on all but our extreme western and northern coasts. *Barometer* falling a little in France and the south-east of England, but rising elsewhere. Large anticyclone lying over the Baltic and the southern half of Scandinavia, and large depression over the Bay of Biscay. Slight fall taking place generally later.	
		**Wednesday, November 7.** *Weather* fine in the north-west of our Islands and the south of France, but cloudy or overcast elsewhere, with rain on the south coasts of England and Ireland. Sleet falling at some of our southern stations during day. *Temperature* fallen in most places. Slight frost occurring over England in early morning, and thermometer remaining below 40° all day at some of our central and south-eastern stations. *Wind* strong to a gale from East or South-East over our Islands and their immediate neighbourhood, but strong from the Westward in the south of France, and light from North-West in Sweden. *Sea* rough or rather so on nearly all coasts. *Barometer* falling generally. Anticyclone lying over the south of Norway, with a large area of low pressure off our extreme south-west coasts, and small secondary depression over the west of France. Latter system dispersing later, and barometer rising over France and the south of England.	
		**Thursday, November 8.** *Weather* fine in Norway, Denmark, and the south of France, but cloudy or overcast elsewhere, with showers at some of our western stations. Heavy rain falling later in the south-west and south of England. *Temperature* fallen in Scandinavia and Denmark, but risen elsewhere. Maximum readings above 50° at our south-western and extreme southern stations, but below 45° in some parts of our midland and eastern counties. *Wind* strong from the Eastward or South-Eastward over our Islands and the west of France, but light and variable at the Scandinavian stations. Subsequently increasing to a gale on our west and south-west coasts. *Sea* rough on all exposed parts of our coasts. *Barometer* falling in the west and north of our Islands, but rising elsewhere. Large anticyclone still lying over Scandinavia, with a low pressure system to the south-westward of our Islands. New depression advancing during day to the mouth of the Channel, and barometer falling quickly in south-west.	
		**Friday, November 9.** *Weather* dull and rainy at many of the British and French stations, with thunder in Perpignan, but fine in Norway, Denmark, and the Netherlands. *Temperature* risen at all but the Scandinavian and Danish stations. Maximum readings above 55° on our south-west coasts, but considerably below 50° over the northern and eastern parts of the Kingdom. *Wind* strong South-Easterly over our Islands and their immediate neighbourhood, but moderate North-Easterly breezes reported in Germany, and fresh Westerly gales over the Bay of Biscay. Subsequently increasing to a gale from the South-Eastward on the north and east coasts of Great Britain. *Sea* high off the east of Scotland, and rough on nearly all other parts of our coasts. *Barometer* falling in the west of our Islands and the south of France, but rising elsewhere. Large anticyclone still lying over Scandinavia, with a depression off the south-west of Ireland, and a secondary disturbance over the south of France. Western depression subsequently moving away over Atlantic, and French disturbance travelling eastwards to Gulf of Genoa.	

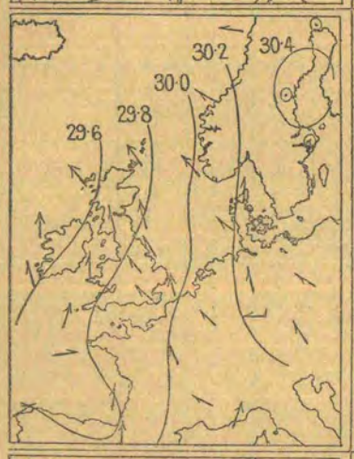
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

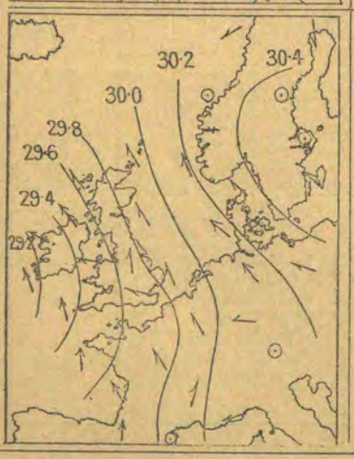
Synoptic Charts.

PRESSURE AND WIND.

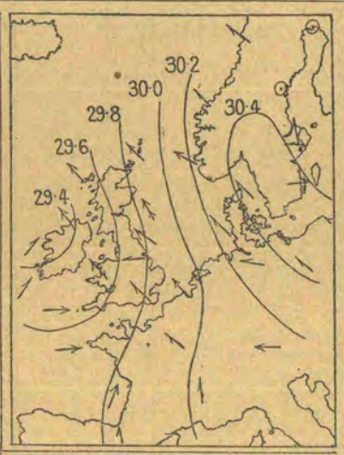
8 a.m.

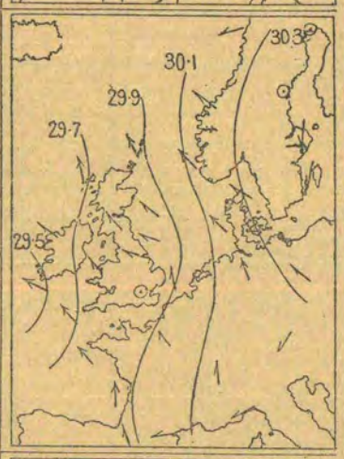


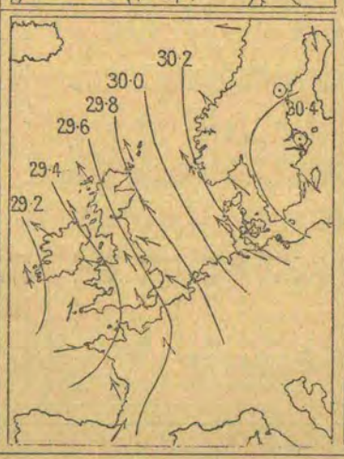




6 p.m.







Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, November 10.

Weather fine at our south-eastern and most of the Continental stations, but dull, squally, and showery on our western and northern coasts. Rain falling later in all parts of Western Europe.

Temperature fallen at all but the Danish stations. Maximum readings above 55° on our extreme south-west coasts, but thermometer in the east of England not rising above 45°.

Wind strong from the South-Eastward in our Islands, with a gale on many parts of our western and northern coasts, but moderate from the Southward in France and calm in Sweden. Subsequently veering to the Westward in the south-west and falling moderate.

Sea high off the north-east of Scotland, and rough on nearly all other parts of our coasts.

Barometer falling over the United Kingdom and the North Sea, but rising elsewhere. Large anticyclone lying over Scandinavia, the Baltic, and North Germany, with a rather deep depression off the west of Ireland. Depression subsequently moving away over Atlantic, and barometer rising again in west.

Sunday, November 11.

Weather fine in Scandinavia, Denmark, Germany, and the west of our Islands, but cloudy elsewhere, with fog over England and rain at several of the French stations. Dense black fog drifting over England in course of day.

Temperature changed very irregularly. Maximum readings over our Islands higher than of late; thermometer rising above 50° at all but our north-western and northern stations.

Wind chiefly South-Easterly or Southerly; light to fresh in force in most places, but strong in the north of Scotland. Subsequently backing to the South-Eastward on our south-west coasts and increasing in strength.

Sea very high off the north and north-east of Scotland, and rough on our east coasts as well as at the mouth of the Channel.

Barometer rising over Ireland, England, and France, but falling elsewhere. Large anticyclone still lying over Scandinavia, the Baltic, and North Germany, with an area of low pressure to the north-westward of our Islands. New depression appearing in south-west later.

Monday, November 12.

Weather fine in the west of Norway, the south of Denmark, and North Germany, but cloudy or overcast elsewhere, with rain at many of our western stations, and fog in the north of England. Rain falling generally later.

Temperature risen in most places. Maximum readings above 50° in the west and south, but below it in the north and east.

Wind chiefly South-Easterly; strong to a gale in force on our west and south-west coasts, but moderate in the north and east. Subsequently increasing to a gale in nearly all parts of the Kingdom.

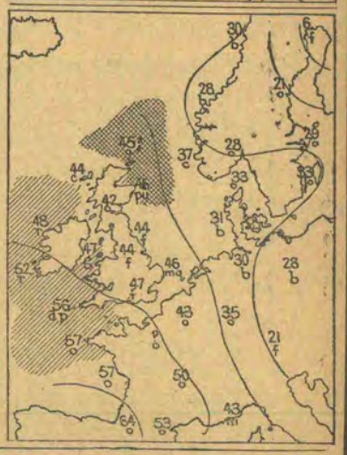
Sea still high off the north of Scotland, and rough on our west and south-west coasts, but moderate or slight elsewhere.

Barometer falling at all but the Scandinavian stations. Anticyclone lying over Sweden and the Baltic, with a deep depression off the south-west of Ireland. Secondary disturbance subsequently advancing over the south-west of England.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

The Observations received from Killarney during the five months, April—August 1888, were in some cases faulty; the following Table of corrected values is therefore published:

Date of Report.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
1888.	°	°	°	°	°	°	°	°		Inches.	Inches.		
April 9 –	51	25	48·8	30·9	39·4	– 7·2	19	40	4	0·22	?	*	*
„ 23 –	54	39	49·4	42·2	45·6	– 3·5	25	0	5	0·41	?	*	*
„ 30 –	55	31	51·6	38·7	44·9	– 5·1	34	9	3	1·24	?	*	*
May 7 –	62	37	55·1	42·9	48·6	– 2·0	46	0	4	1·15	?	*	*
June 25 –	72	44	69·3	48·1	58·1	+ 0·1	113	0	2	0·26	?	*	*

Date of Report.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
1888.	°	°	°	°	°	°	°	°		Inches.	Inches.		
July 2 –	66	43	63·2	52·1	57·3	– 1·6	107	0	3	0·75	?	*	*
„ 16 –	66	36	63·0	45·9	53·9	– 5·6	83	0	2	0·16	?	*	*
„ 30 –	70	45	63·1	49·6	55·9	– 3·6	97	0	7	1·64	?	*	*
August 6 –	70	36	64·2	46·7	54·9	– 4·8	90	0	4	1·00	?	*	*
„ 13 –	70	48	67·4	53·4	60·0	+ 0·4	126	0	3	0·16	?	*	*

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	46	37	44·9	40·1	42·5	0·0	11	5	3	0·06	−0·93	*	*
	Stornoway	50	32	48·3	38·9	43·6	+ 1·5	24	9	3	0·19	−0·90	21	38
	Wick	48	40	46·3	41·6	44·0	+ 2·0	16	1	4	0·11	−0·58	*	*
	Lairg ⚓	49	32	45·0	35·4	40·2	− 0·6	8	25	0	—	−0·91	*	*
	Glencarron ⚓	53	33	47·9	36·3	42·1	+ 1·8	25	16	1	0·02†	?	18	32
	Fort Augustus ⚓	51	41	48·5	42·3	45·4	+ 3·9	24	0	2	0·07†	?	*	*
1. SCOTLAND, E.	Nairn	51	32	47·6	37·7	42·7	+ 1·6	23	12	0	—	−0·53	*	*
	Aberdeen	47	41	45·7	43·0	44·4	+ 2·9	17	0	5	0·57	−0·16	1	1
	Braemar ⚓	45	33	42·3	36·5	39·4	+ 1·6	1	19	4	1·18	+0·28	2‡	3‡
	Ochtertyre ⚓	47	38	45·3	40·0	42·7	+ 1·7	13	6	4	1·89	+0·89	*	*
	Leith	49	34	46·6	39·4	43·0	+ 1·4	18	7	2	0·17	−0·31	*	*
	Marchmont ⚓	46	34	43·6	37·4	40·5	+ 1·6	4	17	3	0·45	−0·34	7	12
2. ENGLAND, N.E.	Alnwick Castle	47	39	44·6	41·0	42·8	+ 0·8	10	3	2	1·21	+0·48	*	*
	Durham	46	36	44·2	38·1	41·4	− 0·3	6	17	2	1·13	+0·44	12	19
	Shields	48	34	45·9	37·0	41·5	− 1·5	11	21	2	1·06	+0·46	*	*
	Scarborough ℳ	47	39	44·4	40·4	42·4	− 0·2	10	4	3	0·63	−0·09	16‡	27‡
	York	55	37	47·1	38·3	42·7	− 0·1	20	10	2	0·98	+0·46	16	27
	Spurn Head	47	40	45·0	40·7	42·9	− 0·6	12	4	3	0·30	?	*	*
3. ENGLAND, E.	Hillington ℳ	49	34	44·0	37·9	41·0	− 2·5	6	16	3	0·40	−0·24	20	32
	Yarmouth	47	36	43·7	37·4	40·6	− 3·4	5	18	3	0·43	−0·30	*	*
	Geldeston	49	35	44·2	38·7	41·5	− 2·7	6	13	3	0·36	−0·28	16	25
	Cambridge	52	32	46·4	36·3	41·4	− 1·6	12	23	2	0·54	−0·04	9	14
	Rothamsted	52	33	45·6	36·1	40·9	− 1·6	10	24	5	0·72	+0·08	*	*
	Ingatestone	49	34	44·4	36·7	40·6	− 2·9	7	21	3	0·68	+0·09	6‡	10‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	48	32	45·9	37·7	41·8	− 1·7	11	18	3	0·69	+0·06	8‡	13‡
	Loughborough	51	34	45·3	36·7	41·0	− 1·4	9	21	4	0·93	+0·38	*	*
	Cheadle ℳ	49	33	42·5	35·7	39·1	− 2·9	1	22	4	1·74	+0·99	*	*
	Churchstoke ℳ	51	32	44·4	36·1	40·3	− 1·4	7	23	5	1·77	+0·94	4	6
	Hereford ℳ	53	33	45·0	36·4	40·7	− 2·4	8	22	5	2·89	+2·31	*	*
	Cirencester	53	33	44·6	36·3	40·5	− 2·0	7	22	5	1·64	+0·93	0	0
	Oxford	53	34	45·1	37·3	41·2	− 1·6	9	19	5	1·03	+0·47	1	1
5. ENGLAND, S.	London	54	32	46·1	37·7	41·9	− 1·9	11	18	4	0·63	+0·12	4‡	6‡
	Strathfield Turgiss ℳ	54	34	46·6	38·9	42·8	− 0·7	19	9	5	1·09	+0·50	*	*
	Dungeness	54	32	46·4	38·9	42·7	− 2·6	18	9	4	0·55	−0·27	*	*
	Hastings (St. Leonard's)	54	33	47·3	39·6	43·5	− 1·7	21	7	4	0·83	+0·06	8	13
	Southampton	55	33	48·8	40·9	44·9	− 0·1	25	3	7	1·63	+0·95	3	5
	Hurst Castle	54	36	50·7	42·6	46·7	+ 0·7	33	0	7	2·04	+1·35	*	*
	Stowell ℳ	56	31	48·2	37·7	43·0	− 1·1	25	12	7	2·29	?	5‡	7‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	?54	38	?49·2	41·0	?45·1	+?2·1	?26	3	3	1·08†	−1·08	*	*
	Glasgow	52	38	46·6	39·3	43·0	+ 2·3	18	8	2	0·52	−0·36	8	13
	Ardrossan	52	36	47·9	38·7	43·3	+ 1·2	23	9	4	0·61	−0·32	*	*
	Glenlee ⚓	51	34	45·6	36·5	41·1	+ 0·8	10	22	6	2·26	?	*	*
	Douglas (Isle of Man)	54	37	47·6	42·2	44·9	+ 1·6	20	0	4	2·05	+1·00	9	14
7. ENGLAND, N.W.	Newton Reigny (Penrith)	47	30	43·6	34·9	39·3	− 2·5	4	26	3	0·77	−0·03	11	18
	Barrow-in-Furness	49	38	45·4	39·0	42·2	− 2·0	14	8	4	1·62	+0·71	*	*
	Stonyhurst	48	35	44·0	37·2	40·6	− 1·9	6	18	3	0·96	−0·14	10	16
	Blackpool ℳ	51	36	45·7	37·9	41·8	− 3·2	10	17	4	0·93	+0·11	11	17
	Manchester	53	36	45·7	37·5	41·6	− 1·8	10	18	5	1·06	+0·19	*	*
	Liverpool Obsy (Bidston)	52	35	45·4	37·9	41·7	− 2·9	10	17	4	1·03	+0·34	*	*
	Llandudno ℳ	57	36	47·6	39·1	43·4	− 2·6	22	8	5	1·05	+0·23	8	13
	Holyhead	54	37	48·0	40·4	44·2	− 2·7	22	4	5	1·80	+0·90	*	*
8. ENGLAND, S.W.	Llandovery	55	32	47·7	37·0	42·4	− 2·1	24	14	6	1·75	+0·57	*	*
	Pembroke	54	36	50·1	44·0	47·1	+ 0·6	36	0	6	2·04	+1·12	8	12
	Arlington (N. Devon)	54	32	49·7	39·4	44·6	+ 0·6	29	7	6	1·84	+0·42	*	*
	Cullompton ℳ	56	33	50·8	39·2	45·0	0·0	33	8	7	3·88	+3·06	5	8
	Falmouth	55	41	53·6	45·7	49·7	+ 2·4	54	0	7	2·80	+1·52	13	21
	Plymouth	56	35	53·4	42·3	47·9	+ 1·0	41	0	6	3·10	+2·27	12	18
	Prawle Point	58	36	53·9	44·1	49·0	+ 2·0	49	0	5	2·57	?	*	*
9. IRELAND, N.	Malin Head	50	34	46·6	40·1	43·4	− 0·6	18	5	2	0·13	?	*	*
	Londonderry	57	35	49·5	39·8	44·7	+ 1·4	28	6	7	0·47	−0·54	*	*
	Mullaghmore	53	38	49·9	42·9	46·4	+ 2·4	31	0	3	0·75	−0·37	*	*
	Belmullet	54	39	50·1	43·6	46·9	+ 0·4	34	0	5	0·49	?	*	*
	Markree Castle	54	39	49·6	41·5	45·6	+ 2·6	27	1	5	0·98	+0·16	8	13
	Brookeborough	54	35	47·4	39·6	43·5	+ 1·3	21	7	4	1·24	?	*	*
	Armagh	54	38	49·5	41·2	45·4	+ 2·3	27	2	5	0·91	+0·26	10	17
	Donaghadee	54	43	48·7	43·4	46·1	+ 1·6	29	0	5	1·98	+1·23	*	*
	Edgeworthstown	53	36	49·7	40·3	45·0	+ 2·0	28	5	5	0·97	+0·15	*	*
10. IRELAND, S.	Dublin	53	40	49·8	43·7	46·8	+ 2·3	34	0	6	1·29	+0·73	8	13
	Parsonstown	56	37	50·4	41·6	46·0	+ 2·8	30	1	5	0·91	+0·24	8	12
	Kilkenny	56	37	51·6	42·4	47·0	+ 3·5	35	0	6	1·19	+0·58	*	*
	Waterford	57	37	53·3	43·4	48·4	+ 2·3	45	0	6	2·16	+1·24	*	*
	Roche's Point	55	43	53·0	47·0	50·0	+ 3·2	56	0	7	3·66	+2·65	*	*
	Valencia	57	43	54·0	46·0	50·0	+ 1·9	36	0	6	1·20	−0·09	5	8
	Killarney	55	39	52·5	43·2	47·9	+ 1·4	41	0	6	2·25	?	*	*
	Foynes	55	38	51·5	43·0	47·3	+ 3·3	37	0	5	1·61	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	58	47	55·6	49·0	52·3	+ 2·3	72	0	7	1·57	+0·69	*	*
	Jersey	58	42	54·6	46·0	50·3	+ 2·5	58	0	6	1·70	+0·71	5	8

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ⚓ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 46.] *Second Series.* WEEK ENDING MONDAY, 19TH NOVEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 184.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	59	33	49·7	41·2	45·5	5 above.	28	+15	2	−20	1621	−231	772	+180
	1. SCOTLAND, EAST	58	32	51·3	40·7	46·0	7 above.	33	+18	4	−22	1915	−440	746	+110
	2. ENGLAND, N.E.	61	36	52·9	42·8	47·7	7 above.	40	+24	0	−21	2034	−499	597	+ 53
	3. ENGLAND, EAST	62	38	54·5	44·7	49·6	8 above.	53	+34	0	−21	2536	−373	749	+176
	4. MIDLAND COUNTIES	61	40	54·7	45·8	50·4	10 above.	59	+40	0	−25	2412	−457	752	+166
	5. ENGLAND, SOUTH	60	40	55·4	48·2	51·8	9 above.	69	+44	0	−17	2718	−446	629	+208
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	56	35	52·2	43·2	47·7	7 above.	40	+21	0	−19	2138	−349	527	+ 67
	7. ENGLAND, N.W.	62	37	53·4	45·1	49·3	6 above.	51	+31	0	−16	2288	−357	535	+108
	8. ENGLAND, S.W.	60	39	54·8	48·5	51·7	7 above.	68	+36	0	− 9	2590	−473	507	+255
	9. IRELAND, NORTH	59	39	53·0	43·8	48·4	6 above.	45	+25	0	−16	2326	−257	429	+ 29
	10. IRELAND, SOUTH	60	41	55·6	47·4	51·5	7 above.	67	+37	0	−13	2702	−243	368	+ 97
	— CHANNEL ISLANDS	60	46	56·8	50·9	53·9	7 above.	83	+39	0	− 1	3065	−307	247	+153

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 184.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	7	23	8 more.	210	+ 9	36·5	−2·2	5	9	1140	− 39	28	0
	1. SCOTLAND, EAST	7	14	7 more.	182	+12	26·2	−2·0	8	13	1194	−147	29	− 3
	2. ENGLAND, N.E.	6	6	1 less.	164	0	23·7	−0·9	8	15	1066	−153	26	− 4
	3. ENGLAND, EAST	5	4	2 less.	168	− 1	22·5*	−0·9	9	16	1201	−285	29	− 8
	4. MIDLAND COUNTIES	6	8	2 more.	154	−10	23·1	−3·2	11	18	1118	−212	27	− 6
	5. ENGLAND, SOUTH	6	4	3 less.	161	+ 4	24·9	+0·1	8	13	1188	−230	29	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	7	20	5 more.	171	−11	36·9	−4·0	7	11	1242	− 42	30	− 1
	7. ENGLAND, N.W.	7	14	5 more.	174	+ 4	26·7	−5·8	2	4	1158	−125	28	− 3
	8. ENGLAND, S.W.	6	11	1 more.	179	− 1	32·4	−6·1	8	13	1389	−146	34	− 4
	9. IRELAND, NORTH	6	10	2 more.	184	−18	31·3	−0·8	12	21	1121	− 86	27	− 2
	10. IRELAND, SOUTH	5	6	3 less.	166	−22	32·1	−2·9	13	22	1326	− 54	32	− 2
	— CHANNEL ISLANDS	6	4	6 less.	197	+ 2	27·5	−1·9	16	25	1613	−208	40	− 5

General Remarks.

Weather has again been dull, rough, and unsettled very generally, with much rain in the north and north-west, and frequent, but less heavy, falls elsewhere. Thunder and lightning were experienced at several of our northern and north-western stations on the 17th.

Temperature has been much above the mean in all districts. In Scotland, the excess has varied from 5° to 7°, and in Ireland from 6° to 7°, while over England it ranged from 6° at the north-western stations and 7° in the north-east and south-west, to 8° in "England, E.", 9° in "England, S.", and 10° in the "Midland Counties". The highest of the maxima, which were registered on the 15th in Ireland and on the 16th over Great Britain, varied from 56° in "Scotland, W." to 62° in "England, E." and "England, N.W." The lowest of the minima were recorded at most stations either on the 18th or 19th, when they ranged from 32° to 35° in Scotland, from 39° to 41° in Ireland, and from 36° to 40° in England; in the "Channel Islands" the lowest reading was 46°. During the greater part of the week the minima were very high for the time of year.

Rainfall has been considerably more than the mean in Scotland, and rather more in some parts of England and Ireland, but in the east and south of England and in the south of Ireland a deficit is shown.

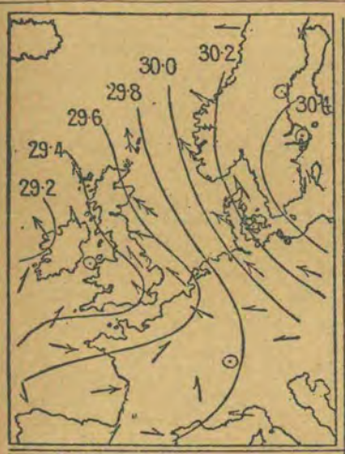
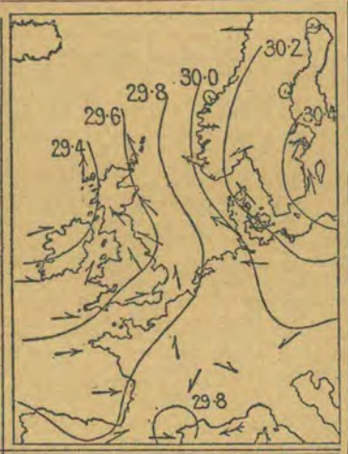
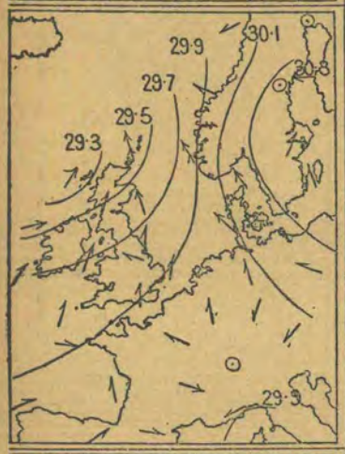
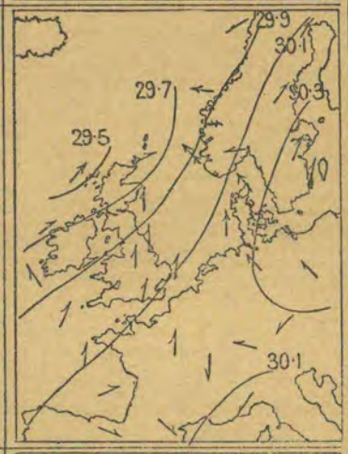
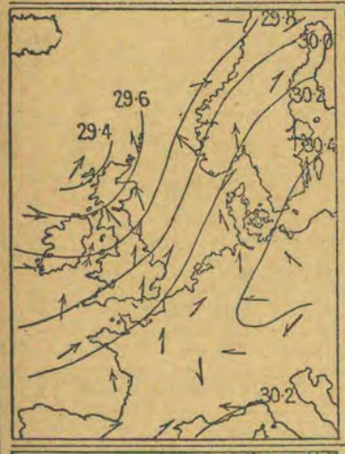
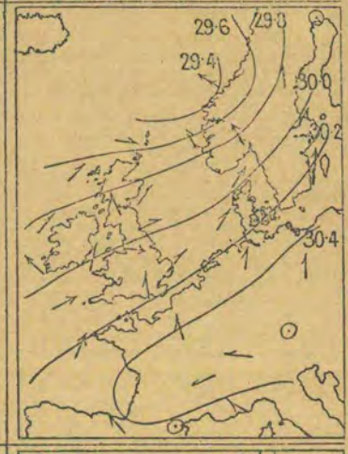
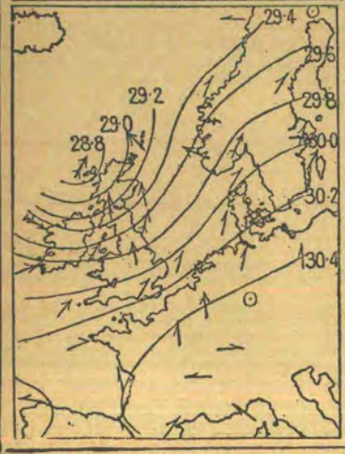
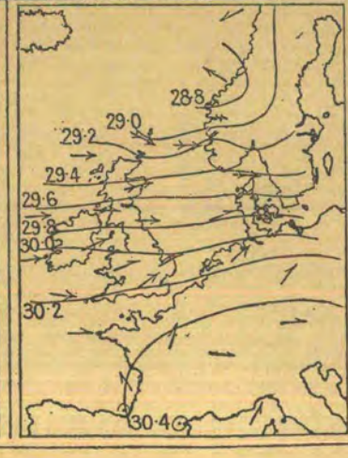
Bright sunshine has continued very deficient generally, but has been rather more prevalent in Ireland and the "Channel Islands" than elsewhere. The percentage of the possible amount of duration ranged from 4 in "England, N.W." and 9 in "Scotland, N." to 18 in the "Midland Counties", to 22 in "Ireland, S.", and 25 in the "Channel Islands".

Depressions observed.—During the whole of this period depressions have continued to travel north-eastwards outside our western and north-western coasts, while subsidiary disturbances have at times moved more directly over us. The depression shown off our north-west coasts on the 16th was extremely deep and caused the wind, which had previously been strong to a gale from between the South-Eastward and South-Westward, to increase to a very severe gale over Ireland and Scotland, and to a fresh gale in the west and north of England. At the end of the period a low pressure system lay off the north-west of Norway, and the wind in our Islands was generally fresh or strong from the Westward.

* This value has been altered slightly owing to the receipt of further information.

A 56463. 350.—11/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

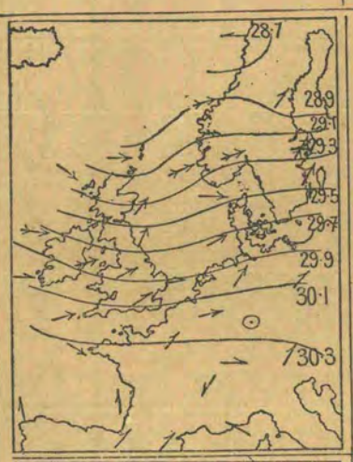
Synoptic Charts. Pressure and Wind. 8 a.m.	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, November 13.** *Weather* fine in Ireland as well as in North Germany and the south of Denmark, but cloudy elsewhere, with rain in many parts of Great Britain and France. Some improvement taking place in south later, but conditions remaining very unsettled in north. *Temperature* changed very irregularly. Maximum readings above 55° on our extreme south-west coasts, and a little above 50° in most other parts of the Kingdom. *Wind* strong to a gale from the South-Eastward over the North Sea and adjacent coasts, but moderate or fresh from the South-Westward in France and the south-west of our Islands. *Sea* very high off the north of Scotland, high on our north-east coasts, and rough at all but our western stations. *Barometer* rising on the west coasts of our Islands and France, but falling elsewhere. Large anticyclone lying over Sweden and the Baltic, with a depression off the west of Ireland and a well-marked secondary disturbance over England. Depression in west subsequently moving away over Atlantic, but secondary system travelling steadily northwards over the United Kingdom.	
		**Wednesday, November 14.** *Weather* fair generally, but foggy in some parts of central England, and rainy in the south of France. Showers falling later in many parts of the United Kingdom. *Temperature* risen a little in most places. Maximum readings above 55° at most of the English and Irish stations. *Wind* strong to a gale from the Southward in the extreme north, and strong from South-East on the eastern shores of the North Sea, but moderate from South-West elsewhere. Subsequently veering to South-West in the north, and falling light. *Sea* very high off the north and north-east of Scotland, rough off the north-east of England, and rather rough in the Bay of Biscay. *Barometer* rising at all but our extreme northern and the Scandinavian stations. Anticyclone still lying over the Baltic, with a depression off the north-west of Scotland. Depression subsequently moving northwards, and barometer rising generally.	
		**Thursday, November 15.** *Weather* fine in Sweden and Germany, but cloudy or overcast elsewhere, with rain in many parts of Great Britain, and fog over Denmark, the Netherlands, France, and the south-west of England. *Temperature* risen in most places. Maximum readings very little below 60° except in the extreme north and north-west. *Wind* South-Westerly on our western coasts, but Southerly or South-Easterly elsewhere; strong to a gale in force at many of our northern and north-western stations. Wind moderating later, and backing to South-East in the south of Ireland. *Sea* rough on all the more exposed parts of our coasts. *Barometer* falling in Scandinavia and the northern parts of the United Kingdom, but rising elsewhere. Anticyclone over Baltic now extending south-westward, and new depression lying off the north-west of Scotland. Depression subsequently travelling away north-eastwards, but barometer falling again in the south-west of Ireland.	
		**Friday, November 16.** *Weather* cloudy generally, with heavy rain in the west and north of Scotland, and fog over Denmark, the Netherlands, the east of France, and the south-west of England. Showers falling generally later. *Temperature* again risen generally. Maximum readings considerably above 55° in nearly all parts of Great Britain, highest being 62° at Geldeston and Llandudno, and 61° at York, Loughborough, and Cambridge. *Wind* blowing a severe gale from the Southward in the west of Ireland in early morning and subsequently a severe gale from South-West and West in Scotland. Moderate to strong South-Westerly gales experienced in most other parts of the Kingdom. *Sea* high on our western and northern coasts, and rough in most other places. *Barometer* falling at all but the French stations, rapidly in Scotland. Anticyclone lying over France and South Germany, with centre of very large and deep depression near the Hebrides. Depression subsequently travelling north-eastwards, and rapid increase of pressure taking place on our north and north-west coasts.	

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

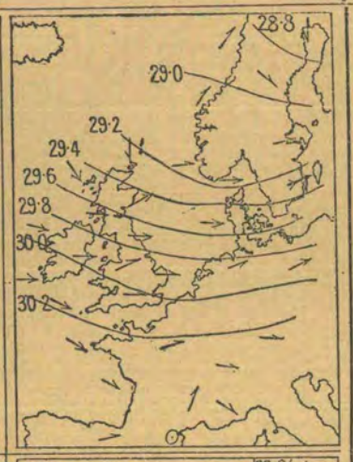
Synoptic Charts.

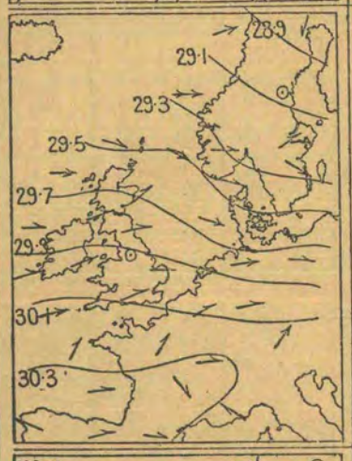
PRESSURE AND WIND.

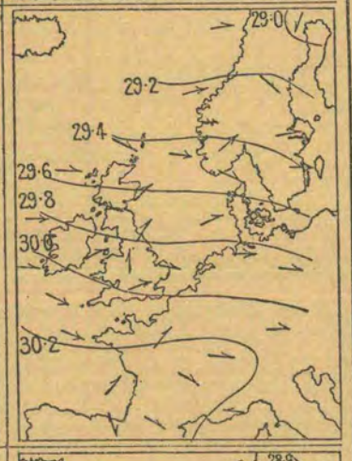
8 a.m.

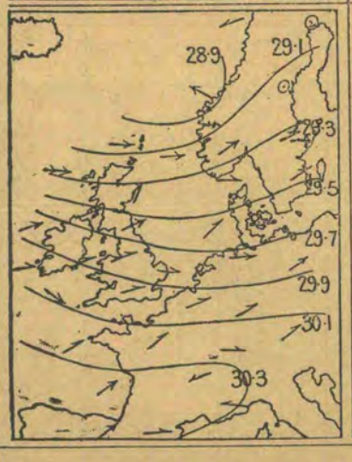


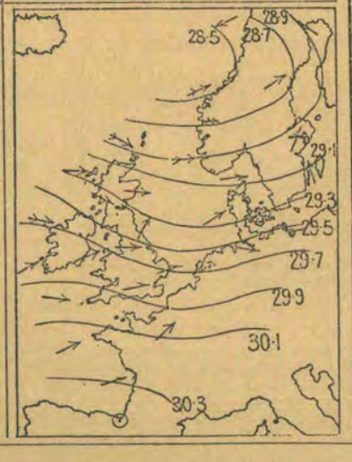
6 p.m.











Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, November 17.

Weather squally and showery over the greater part of our Islands, rainy in the west of Norway and foggy at some of the French and German stations.

Temperature fallen several degrees in our Islands, but risen at the Continental stations. Maximum readings below 50° at all our more northern stations and below 45° in the north-east of Scotland.

Wind South-Westerly or Westerly; strong in force generally, with gales on our north-west coasts and also in Scandinavia.

Sea rough on nearly all coasts.

Barometer rising in the extreme west and south of our Islands, but falling elsewhere. Anticyclone now lying over Spain and the southern half of France. Depression of previous day advancing over north of Scandinavia, but shallow and ill-defined secondary disturbances travelling eastwards across the United Kingdom. Rise taking place later on our western and northern coasts.

Sunday, November 18.

Weather fine in Sweden, Denmark, and Germany, but cloudy or overcast elsewhere, with rain over the greater part of England. Some improvement taking place over England later, but weather remaining somewhat showery generally.

Temperature risen in the west and north of our Islands, and also in Germany and the south of France, but fallen elsewhere. Maximum readings a little above 50° generally and above 55° in the extreme south-west.

Wind South-Westerly or Westerly generally; light or moderate in force in most places, but fresh or strong at some of the southern stations.

Sea rough off the west of Norway, and rather rough on the more exposed parts of our western, northern, and southern coasts.

Barometer falling in Germany, France, and the south of our Islands, but rising elsewhere. Anticyclone lying over Spain and the southern half of France, with a low pressure system over the north of Sweden. Shallow depressions passing eastwards across our Islands during day.

Monday, November 19.

Weather cloudy or overcast in most places, with rain on our extreme north and north-west coasts. Rain falling generally later, with thunder and lightning at some of our north-western stations.

Temperature risen at all but the Scandinavian stations. Maximum readings above 55° in many parts of the Kingdom.

Wind Westerly or South-Westerly; moderate or fresh in force generally, but strong in the extreme north. Subsequently increasing to moderate or fresh gale on all our more northern coasts.

Sea rough in the extreme south-west, north-west, and north, but moderate to smooth elsewhere.

Barometer falling at all but the French stations. Anticyclone still lying over Spain and the south of France, with a large and deep depression off the west of Norway. Subsidiary disturbances subsequently appearing over our northern districts, and barometer falling generally.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

ERRATA.—Quarterly Summary, Weekly Weather Report, Third Quarter 1888.

Page 5.	DISTRICTS.										
	4.	5.	Means (Wheat Districts).	6.	7.	8.	9.	10.	Means (Grazing Districts).	Channel Islands.	Means (British Islands).
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Rainfall 1888 should read - - - -	7·9	7·9	8·1	9·7	9·6	9·8	9·5	8·4	9·4	7·8	8·8
Means, 23 years 1866-88 should read - -	8·3	7·5	7·9	11·7	10·9	11·1	10·7	10·0	10·9	—	9·4

Page 6.	RAINFALL.—AMOUNT IN INCHES.																					
	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.
September should read - - - -	2·15	18·33	2·15	19·90	2·02	19·56	2·15	29·67	2·28	30·98	2·94	24·50	2·12	26·58	1·58	26·09	2·20	25·57	2·04	21·69	2·11	22·59

III.—DATA from which the SUMMARY on page 181 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	51	40	48·0	42·6	45·3	+ 3·8	23	0	7	2·25	+1·26	*	*
	Stornoway	54	38	50·7	42·4	46·6	+ 5·4	32	0	7	2·45	+1·37	10	18
	Wick	52	37	49·4	41·1	45·3	+ 4·4	27	3	7	1·00	+0·31	*	*
	Lairg Ⓢ	52	33	47·6	38·4	43·0	+ 3·3	22	10	7	1·08	+0·16	*	*
	Glencarron Ⓢ	57	36	50·7	40·9	45·8	+ 6·9	31	3	7	4·40†	?	0	0
	Fort Augustus Ⓢ	59	37	51·8	41·5	46·7	+ 6·7	35	1	7	2·61†	?	*	*
1. SCOTLAND, E.	Nairn	57	34	52·7	40·4	46·6	+ 6·5	39	4	6	0·81	+0·28	*	*
	Aberdeen	58	39	51·7	41·7	46·7	+ 6·6	34	1	7	1·27	+0·52	17	30
	Braemar Ⓢ	53	35	48·7	38·6	43·7	+ 7·5	26	10	7	1·59	+0·71	1‡	2‡
	Ochtertyre Ⓢ	58	32	52·9	39·7	46·3	+ 7·0	40	6	7	2·75	+1·76	*	*
	Leith	58	39	53·7	43·3	48·5	+ 8·0	46	0	7	0·81	+0·32	*	*
	Marchmont Ⓢ	55	37	48·0	40·3	44·2	+ 6·3	23	5	7	1·34	+0·54	5	8
2. ENGLAND, N.E.	Alnwick Castle	56	37	50·1	41·9	46·0	+ 5·5	28	0	6	1·05	+0·30	*	*
	Durham	59	38	53·1	41·5	47·3	+ 6·8	39	1	6	0·58	−0·11	9	16
	Shields	60	36	54·1	41·6	47·9	+ 6·2	43	1	5	0·33	−0·28	*	*
	Scarborough Ⓜ	59	37	52·3	43·3	47·8	+ 6·3	41	0	7	0·49	−0·23	7‡	12‡
	York	61	38	54·9	42·9	48·9	+ 7·7	48	0	7	0·79	−0·27	9	16
	Spurn Head	?58	41	?52·6	?43·7	?48 2	?+ 6·2	?43	0	6	0·42	?	*	*
3. ENGLAND, E.	Hillington Ⓜ	60	38	54·1	44·5	49·3	+ 7·7	51	0	7	0·49	−0·14	8	13
	Yarmouth	59	39	53·1	43·4	48·3	+ 6·1	44	0	5	0·38	−0·35	*	*
	Geldeston	62	40	54·9	45·2	50·1	+ 7·7	57	0	4	0·29	−0·35	10	17
	Cambridge	61	39	57·0	43·9	50·5	+ 9·1	60	0	6	0·60	+0·03	12	21
	Rothamsted	59	44	54·8	46·2	50·3	+ 9·5	58	0	6	0·34	−0·28	*	*
	Ingatestone	59	40	53·3	45·0	49·2	+ 7·6	50	0	5	0·29	−0·28	7‡	12‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	61	41	55·4	44·9	50·2	+ 8·3	57	0	6	0·49	−0·02	9‡	15‡
	Loughborough	61	43	56·4	45·4	50·9	+10·0	62	0	6	0·54	+0·01	*	*
	Cheadle Ⓜ	57	40	52·8	44·4	48·6	+ 8·4	46	0	7	1·12	+0·38	*	*
	Churchstoke Ⓜ	59	42	54·2	45·9	50·1	+ 9·9	57	0	7	1·27	+0·46	12	20
	Hereford Ⓜ	59	45	55·2	47·5	51·4	+ 9·9	66	0	5	0·90	+0·35	*	*
	Cirencester	57	41	53·9	45·3	49·6	+ 9·0	53	0	6	0·71	0·00	10	17
	Oxford	59	44	55·3	47·1	52·2	+11·1	71	0	7	0·44	−0·10	11	18
5. ENGLAND, S.	London	60	46	56·0	47·7	51·9	+ 9·9	69	0	5	0·18	−0·32	7‡	11‡
	Strathfield Turgiss Ⓜ	58	40	55·3	46·2	50·8	+ 9·0	62	0	7	0·32	−0·26	*	*
	Dungeness	57	46	55·3	49·0	52·2	+ 8·2	71	0	6	0·33	−0·47	*	*
	Hastings (St. Leonard's)	57	47	55·2	48·6	51·9	+ 7·9	69	0	6	0·27	−0·48	11	18
	Southampton	59	47	56·5	48·9	52·7	+ 9·7	75	0	7	0·46	−0·22	11	19
	Hurst Castle	58	47	55·6	50·3	53·0	+ 8·5	77	0	7	0·43	−0·26	*	*
	Stowell Ⓜ	57	43	53·9	46·8	50·4	+ 8·2	59	0	7	0·74	?	3‡	5‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	?	35	?	43·2	?	?	?	?	7	3·25 †	+1·04	*	*
	Glasgow	56	39	51·7	42·7	47·2	+ 7·2	36	0	7	1·30	+0·42	4	6
	Ardrossan	53	41	51·6	45·1	48·4	+ 7·5	45	0	7	1·44	+0·52	*	*
	Glenlee Ⓢ	56	38	52·1	40·1	46·1	+ 7·2	37	5	7	2·33	?	*	*
	Douglas (Isle of Man)	55	40	53·4	44·8	49·1	+ 6·7	50	0	7	1·50	+0·42	9	16
7. ENGLAND, N.W.	Newton Reigny (Penrith)	55	37	51·7	41·7	46·7	+ 6·2	34	1	7	1·79	+0·99	2	4
	Barrow-in-Furness	56	41	52·0	44·9	48·5	+ 5·5	46	0	7	1·41	+0·51	*	*
	Stonyhurst	59	40	53·6	44·1	48·9	+ 7·8	48	0	7	1·66	+0·57	4	6
	Blackpool Ⓜ	57	43	52·2	44·6	48·4	+ 4·9	45	0	7	1·22	+0·42	0	0
	Manchester	58	42	53·1	45·3	49·2	+ 7·2	50	0	7	1·57	+0·72	*	*
	Liverpool Obsr (Bidston)	60	44	54·7	46·4	50·6	+ 7·5	60	0	7	1·20	+0·54	*	*
	Llandudno Ⓜ	62	45	55·4	45·9	50·7	+ 5·9	61	0	7	1·32	+0·51	2	4
	Holyhead	55	45	54·1	48·0	51·1	+ 5·5	64	0	7	0·66	−0·23	*	*
8. ENGLAND, S.W.	Llandovery	58	39	54·7	46·3	50·5	+ 8·0	60	0	7	2·18	+1·01	*	*
	Pembroke	55	42	54·0	49·9	52·0	+ 7·0	70	0	7	0·88	−0·03	8	13
	Arlington (N. Devon)	56	43	53·1	47·4	50·3	+ 7·8	58	0	7	2·40	+0·96	*	*
	Cullompton Ⓜ	60	40	55·9	47·1	51·5	+ 8·0	67	0	6	0·67	−0·12	5	8
	Falmouth	57	47	55·4	49·5	52·5	+ 6·6	74	0	5	0·61	−0·67	12	19
	Plymouth	57	45	56·0	49·5	52·8	+ 7·5	76	0	6	0·76	−0·05	7	11
	Prawle Point	56	47	54·6	49·7	52·2	+ 6·8	71	0	6	0·38	?	*	*
9. IRELAND, N.	Malin Head	54	39	51·4	42·9	47·2	+ 4·6	36	0	7	1·47	?	*	*
	Londonderry	59	41	53·1	43·7	48·4	+ 6·0	45	0	6	1·07	+0·06	*	*
	Mullaghmore	58	40	53·6	45·4	49·5	+ 6·5	53	0	7	1·29	+0·17	*	*
	Belmullet	54	39	52·9	45·4	49·2	+ 3·8	50	0	7	1·49	?	*	*
	Markree Castle	55	42	52·6	43·8	48·2	+ 6·0	43	0	7	0·98	+0·16	14	24
	Brookeborough	57	42	52·8	42·2	47·5	+ 6·3	39	0	6	1·12	?	*	*
	Armagh	56	42	53·7	43·3	48·5	+ 6·5	46	0	5	0·84	+0·20	10	17
	Donaghadee	55	42	53·0	45·3	49·2	+ 6·4	50	0	6	0·36	−0·37	*	*
	Edgeworthstown	58	41	53·9	41·9	47·9	+ 6·3	42	0	7	0·62	−0·22	*	*
10. IRELAND, S.	Dublin	60	45	55·2	45·9	50·6	+ 7·1	60	0	5	0·44	−0·07	13	22
	Parsonstown	59	42	54·6	45·7	50·2	+ 8·2	57	0	6	0·49	−0·16	12	21
	Kilkenny	58	41	55·0	45·4	50·2	+ 7·8	57	0	5	0·45	−0·15	*	*
	Waterford	58	44	56·1	46·4	51·3	+ 6·5	65	0	5	0·42	−0·48	*	*
	Roche's Point	57	48	55·6	49·4	52·5	+ 7·2	74	0	4	0·75	−0·31	*	*
	Valencia	58	48	56·1	50·3	53·2	+ 6·2	78	0	7	0·71	−0·58	13	22
	Killarney	59	45	57·0	48·7	52·9	+ 7·5	76	0	4	0·55	?	*	*
	Foynes	59	42	55·1	47·6	51·4	+ 8·3	66	0	6	0·75	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	57	50	56·0	51·7	53·9	+ 5·3	83	0	5	0·29	−0·59	*	*
	Jersey	60	46	57·6	50·1	53·9	+ 7·9	83	0	6	0·47	−0·52	16	25

Stations marked Ⓜ are in connection with the Royal Meteorological Society, and those marked Ⓢ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 47.] *Second Series.* WEEK ENDING MONDAY, 26TH NOVEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 188.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	56	27	46·3	35·5	40·9	2 above.	12	+ 2	26	+ 1	1633	−226	798	+180
	1. SCOTLAND, EAST	58	26	49·4	37·1	43·3	5 above.	30	+18	14	−16	1945	−417	760	+ 93
	2. ENGLAND, N.E.	59	30	51·8	42·0	46·9	7 above.	34	+20	0	−25	2068	−474	597	+ 27
	3. ENGLAND, EAST	58	36	52·6	43·7	48·2	8 above.	41	+27	0	−26	2579	−342	749	+152
	4. MIDLAND COUNTIES	57	34	51·8	43·5	47·7	8 above.	40	+24	0	−30	2452	−429	752	+136
	5. ENGLAND, SOUTH	57	39	53·1	46·2	49·6	8 above.	53	+31	0	−29	2771	−409	629	+189
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	58	33	50·0	40·9	45·5	5 above.	29	+13	3	−19	2167	−332	530	+ 46
	7. ENGLAND, N.W.	58	34	51·6	44·4	48·0	6 above.	42	+24	0	−19	2330	−337	535	+ 87
	8. ENGLAND, S.W.	66	36	52·7	45·5	49·1	6 above.	50	+22	0	−11	2640	−447	507	+243
	9. IRELAND NORTH	56	32	50·8	41·9	46·4	5 above.	31	+12	0	−20	2357	−239	429	+ 7
	10. IRELAND, SOUTH	58	30	52·1	44·6	48·4	5 above.	45	+18	0	−16	2747	−218	368	+ 77
	— CHANNEL ISLANDS	57	45	54·9	49·5	52·2	6 above.	71	+32	0	− 3	3136	−272	247	+153

Rainfall. **Bright Sunshine.**

	DISTRICTS. (See p. 188.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of in.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	7	40	18 more.	217	+11	40·5	−0·4	3	5	1143	− 43	27	− 1
	1. SCOTLAND, EAST	7	16	9 more.	189	+15	27·8	−1·1	10	19	1204	−148	29	− 3
	2. ENGLAND, N.E.	5	3	4 less.	169	− 1	24·0	−1·2	11	21	1077	−157	24	− 4
	3. ENGLAND, EAST	3	5	1 less.	171	− 3	23·0	−1·0	10	17	1211	−291	29	− 8
	4. MIDLAND COUNTIES	4	8	2 more.	158	−11	23·9	−3·0	10	17	1128	−217	27	− 6
	5. ENGLAND, SOUTH	4	7	0 (average).	165	+ 4	25·7 *	+0·2	7	12	1195	−243	29	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	7	31	10 more.	178	− 8	40·0	−2·3	5	8	1247	− 49	30	− 1
	7. ENGLAND, N.W.	6	16	8 more.	180	+ 6	28·3	−5·0	5	8	1163	−132	28	− 3
	8. ENGLAND, S.W.	5	13	2 more.	184	− 1	33·7	−5·9	9	16	1398	−153	33	− 5
	9. IRELAND, NORTH	7	13	4 more.	191	−16	32·6	−0·4	8	14	1120	− 93	27	− 2
	10. IRELAND, SOUTH	6	9	0 (average).	172	−20	33·0	−2·8	7	12	1333	− 64	32	− 2
	— CHANNEL ISLANDS	5	5	4 less.	202	+ 2	28·0	−2·3	12	20	1625	−210	39	− 6

General Remarks.

Weather has continued in a very unsettled and rough condition in all parts of the Kingdom. Extremely heavy rain has fallen over the greater part of Scotland and considerable quantities at most of the English and Irish stations, but in the eastern parts of England the rainfall has been comparatively slight. Thunder and lightning occurred at some of the Irish stations on the 20th, and lightning was very prevalent over the south of England at the close of the period.

Temperature has again been above the mean. Over England the excess has been as much as 6° to 8°, and in Ireland 5°; but in Scotland (where the thermometer was at times low) the excess varied between 2° and 5°. The highest of the maxima, which were recorded on rather irregular dates, ranged from 56° to 59°. The lowest of the minima were generally registered either at the beginning or end of the period, when temperature fell to between 26° and 33° over Scotland, 30° and 32° in Ireland, and between 30° and 39° over England. In the "Channel Islands" the lowest reading was 45°.

Rainfall has been less than the mean in the east and north-east of England and in the "Channel Islands", and about equal to it in the southern parts of England and Ireland; but in all other districts it has been more than its normal value, especially over Scotland. At Glencarron the fall during the 21st was as much as 3·80 ins. and the total fall for the five days ending on the 24th was 7·16 ins.

Bright sunshine has again been very deficient in all places. The percentage of the possible amount of duration ranged from 5 in "Scotland, N." and 8 in "England, N.W." and "Scotland, W." to 20 in the "Channel Islands" and 21 in "England, N. E."

Depressions observed.—During the whole of this period a series of large and deep depressions travelled in an easterly or north-easterly direction to the northward of our Islands and over Scandinavia, but the only disturbances which appeared directly over us were some subsidiary systems which moved eastwards over our southern counties towards the end of the period. Very strong winds or gales again prevailed over the United Kingdom with but little cessation, and varied in direction between South-West and West.

* This value has been altered owing to the receipt of further information.

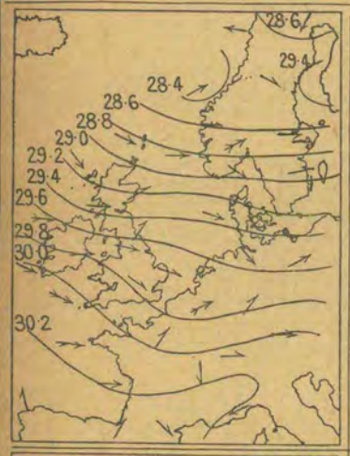
A 56546. 350.—11/88. Wt. 37. E. & S.

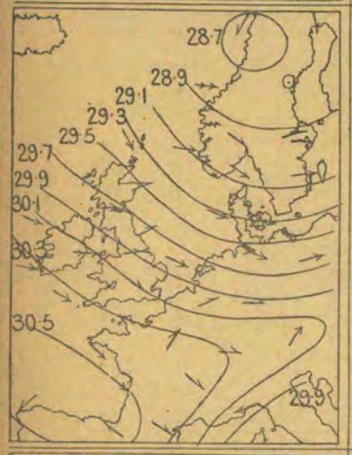
II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

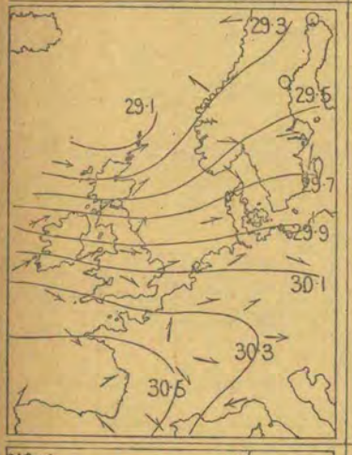
Synoptic Charts.

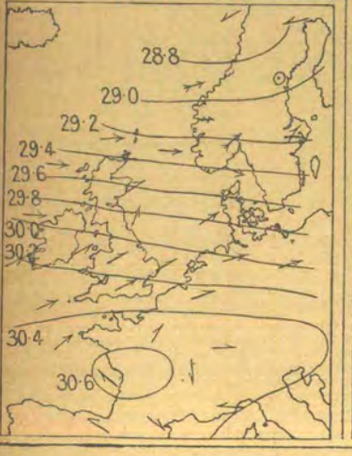
PRESSURE AND WIND.

8 a.m.

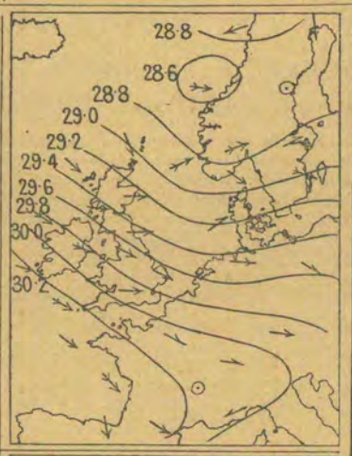


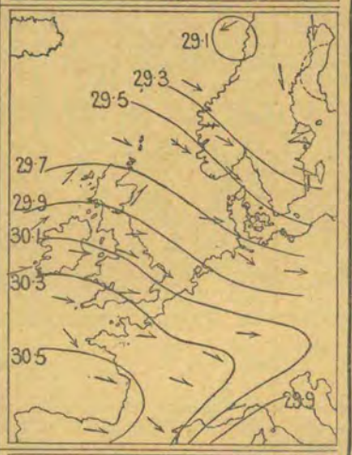


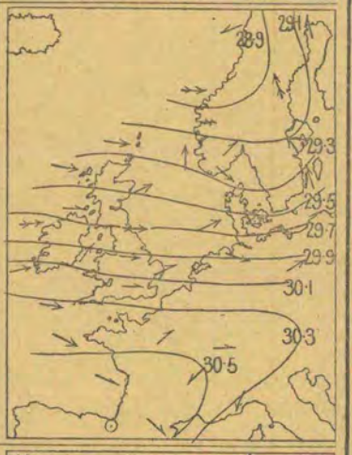


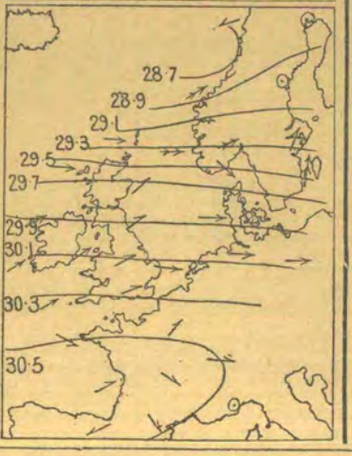


6 p.m.









Weather

During the 24 hours succeeding

8 a.m. on the dates given.

Tuesday, November 20.

Weather squally and showery in most districts, with sleet or snow in the north and east of Scotland and hail in the north of Ireland. Thunder and lightning occurring later in the north and north-west.

Temperature fallen at all but the Swedish, German, and French stations—quickly over our Islands. Maximum readings below 50° on all but our extreme southern coasts, and below 40° in some parts of Scotland.

Wind strong to a gale from the Westward in most places, but Easterly in the north of Scandinavia. Subsequently veering to the Northward of West at many of our western stations.

Sea high in the extreme north, and rough on all but our east coasts.

Barometer falling at all but our extreme western stations. Pressure highest, 30·3 ins. and upwards, in Spain, and lowest, 28·4 ins. and less, in two depressions lying respectively over Finland and off the west of Norway. Rise taking place later in most parts of our Islands and France.

Wednesday, November 21.

Weather fair at our southern and many of the Continental stations, but cloudy and unsettled elsewhere, with sleet and hail showers on our extreme north and north-west coasts. Showers falling generally later, and lunar halo seen in the south of England.

Temperature risen in the west and north of our Islands, but fallen elsewhere. Maximum readings a little above 50° in most parts of the Kingdom.

Wind strong from the Westward or North-Westward generally, with gales on our north-west coasts. Wind moderating later, and backing to the South-Westward at some of our western and northern stations.

Sea rough on all but our north-east coasts.

Barometer rising generally. Anticyclone lying over the southern part of the Bay of Biscay, with a depression over the north of Norway. Depression gradually filling up later, but fresh fall of barometer setting in on our extreme western coasts.

Thursday, November 22.

Weather fine in Sweden, Denmark, Germany, and the south of France, but cloudy elsewhere, with rain on our extreme north and north-west coasts. Showers falling later in most districts, and thunder and lightning occurring in the north-east of Scotland.

Temperature risen generally. Maximum readings a little above 55° in many parts of Great Britain.

Wind South-Easterly in the west of Norway, but Westerly or South-Westerly elsewhere; strong in force in most parts of our Islands, with gales at some of our western stations.

Sea high or rough on all but our east coasts.

Barometer falling in our Islands, but rising at most of the Continental stations. Anticyclone still lying over the southern parts of the Bay of Biscay, the south-west of France, and the north of Spain, with a large and deep depression to the northward of Scotland. Depression subsequently moving north-eastwards, and barometer rising on our northern coasts.

Friday, November 23.

Weather cloudy and showery at all our more western and northern stations, but fair in many other localities. Thunder and lightning occurring over the north of our Islands at night.

Temperature fallen several degrees in Scotland, but risen elsewhere. Maximum readings below 50° in the extreme north, but a little above 55° in most other districts.

Wind very strong from the Westward or South-Westward generally, with gales in Norway.

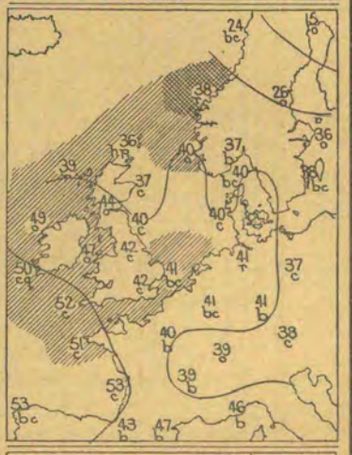
Sea high at Sumburgh Head and Mullaghmore, and rough on all but our east coasts.

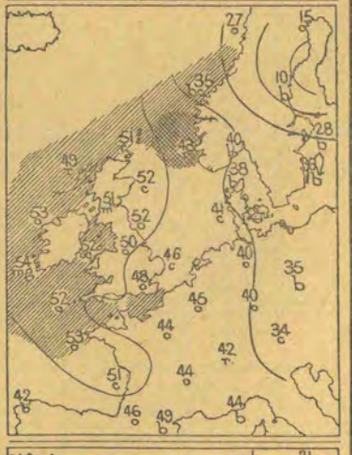
Barometer rising at all but the Swedish stations. Anticyclone lying over France and Spain, with a deep depression off the north-west of Norway. Fall taking place later on our extreme western coasts.

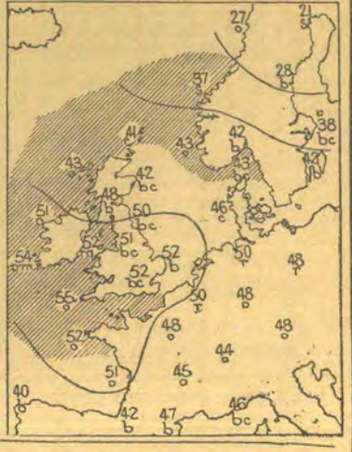
Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





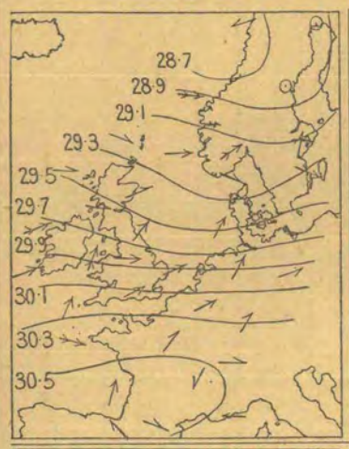


SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

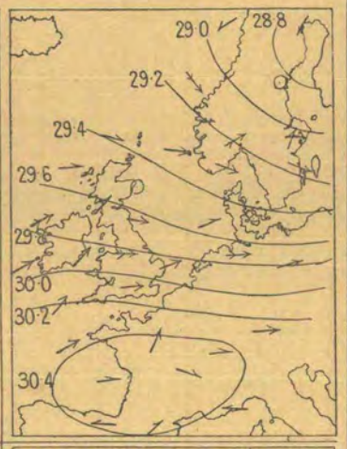
Synoptic Charts.

PRESSURE AND WIND.

8 a.m.



6 p.m.



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, November 24.

Weather cloudy generally, with rain at some of our western stations and snow at Christiansund. Rain falling later over the northern parts of the United Kingdom.

Temperature fallen in Scotland and Sweden, but changed irregularly elsewhere. Maximum readings a little above 55° at many of the English and Irish stations.

Wind South-Westerly or Westerly; moderate in force in Scotland, but strong to a gale elsewhere.

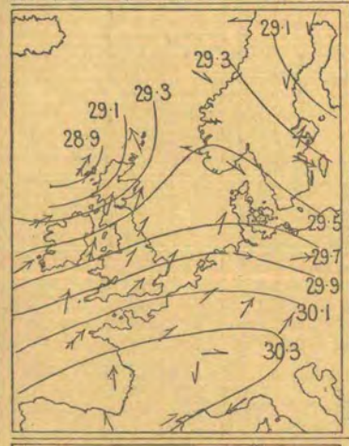
Sea rough on all but the Scotch coasts.

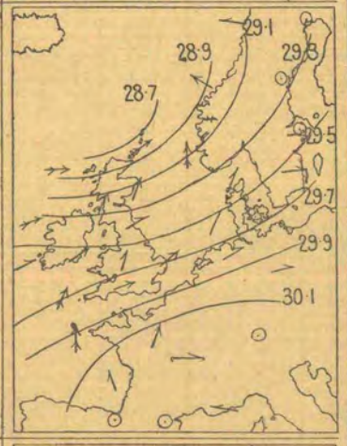
Barometer falling generally. Anticyclone still lying over France and Spain, with a deep depression off the north-west of Norway, and small secondary disturbances over Scotland and the North Sea. Rise taking place later in most parts of our Islands.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Sunday, November 25.

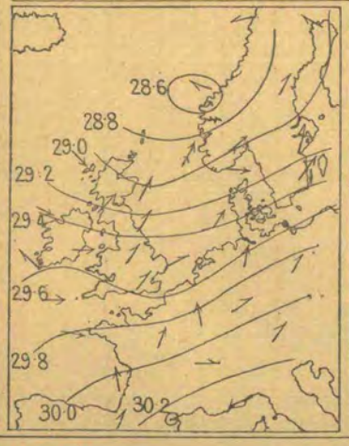
Weather fine in the southern parts of Scandinavia and France, but cloudy or overcast elsewhere, with rain on our extreme western and northern coasts. Rain falling generally later, and aurora seen in the north of Scotland at night.

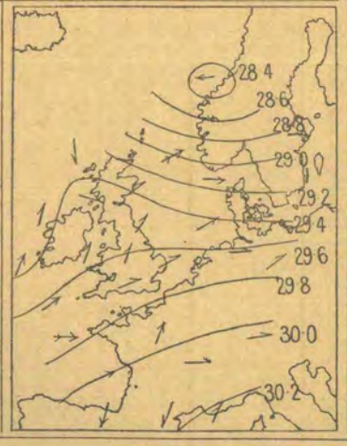
Temperature risen several degrees in Scotland, but changed little and irregularly elsewhere. Maximum readings above 55° in many parts of Great Britain.

Wind strong to a gale from the South-Westward on our western and northern coasts, and fresh from the same quarter in the south-east, but light from the Northward over the northern parts of Scandinavia. Subsequently increasing to a strong gale over the Channel and south of England.

Sea high at Stornoway, and rough on all but our east coasts.

Barometer falling at all but the Scandinavian and Danish stations. Anticyclone still lying over France and Spain, with a new and deep depression off the north-west of Scotland. Depression subsequently travelling north-eastward, and barometer rising slightly in extreme west.





Monday, November 26.

Weather fine in many places, but rainy over the Netherlands and North Germany, and showery in the north of Ireland. Rain falling later in many parts of the United Kingdom, and lightning seen in the south of England at night.

Temperature fallen several degrees over our Islands and Germany, but risen slightly elsewhere. Maximum readings below 50° at all but our extreme southern stations, and below 45° in the north and north-west.

Wind Easterly in the north of Scandinavia, but South-Westerly elsewhere; strong to a gale in force at our extreme northern and many of the Continental stations. Subsequently backing to the Southward on our western coasts.

Sea high at Skudesnaes and Cape Grisnez, and rough on most parts of our western and southern coasts.

Barometer falling at all but our extreme western and northern stations. Pressure highest over Spain and the south of France, with a deep depression off the west of Norway. New disturbances appearing later off our west and south-west coasts.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

Date of Report.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending Nov. 5	Ingatestone	54	42	51·1	44·0	47·5	+ 1·9	39	0	6	2·21	+1·57	6	10

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.	*	*
0. SCOTLAND, N.	Sumburgh Head												*	*
	Stornoway	54	35	48·0	37·1	42·6	+ 1·6	25	14	6	3·56	+2·48	5	10
	Wick	52	33	46·6	35·0	40·8	+ 0·6	13	28	7	1·37	+0·67	*	*
	Lairg	56	28	45·0	34·0	39·5	+ 0·8	8	30	7	3·11	+2·19	*	*
	Glencarron	51	27	?45·1	34·5	39·8	+ 1·9	9	28	7	7·45†	?	0	0
	Fort Augustus	53	32	46·8	36·7	41·8	+ 2·8	13	22	7	4·64†	?	*	*
1. SCOTLAND, E.	Nairn	56	34	48·7	36·0	42·4	+ 3·0	28	17	6	2·02	+1·50	*	*
	Aberdeen	58	34	49·3	37·0	43·2	+ 4·2	29	14	6	0·91	+0·16	18	34
	Braemar	51	31	47·0	34·4	40·7	+ 5·8	14	30	7	2·63	+1·79	5‡	10‡
	Ochtertyre	55	26	51·0	36·7	43·9	+ 5·9	36	15	7	1·98	+0·99	*	*
	Leith	56	33	50·9	40·4	45·7	+ 6·2	33	4	7	1·34	+0·86	*	*
	Marchmont	54	32	49·4	37·9	43·7	+ 6·3	29	11	6	0·98	+0·18	8	14
2. ENGLAND, N.E.	Alnwick Castle	54	30	49·4	40·4	44·9	+ 5·4	27	4	5	0·33	−0·42	*	*
	Durham	57	33	51·8	40·9	46·4	+ 6·6	35	3	4	0·11	−0·59	12	22
	Shields	59	33	52·4	41·7	47·1	+ 6·1	37	1	4	0·20	−0·41	*	*
	Scarborough	58	36	53·4	42 1	47·8	+ 7·5	41	0	6	0·23	−0·44	9‡	17‡
	York	58	35	53·0	43·6	48·3	+ 8·2	44	0	6	0·38	−0·24	12	23
	Spurn Head	55	36	50·7	43·0	46 9	+ 6·1	34	0	5	0·17	?	*	*
3. ENGLAND, E.	Hillington	55	36	53·1	43·6	48·4	+ 8·3	45	0	3	0·43	−0·20	10	18
	Yarmouth	55	36	50·9	43·6	47·3	+ 6·4	37	0	4	0·51	−0·22	*	*
	Geldeston	56	37	53·3	43·6	48·5	+ 7·5	46	0	4	0·56	−0·06	11	18
	Cambridge	58	37	53·4	43·6	48·5	+ 8·4	46	0	3	0·53	−0·05	11	20
	Rothamsted	56	38	53·1	43·7	48·4	+ 8·6	45	0	2	0·76	+0·15	*	*
	Ingatestone	55	36	51·7	44·2	48·0	+ 7·7	42	0	2	0·40	−0·13	6‡	11‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	57	36	52·7	43·7	48·2	+ 7·2	43	0	5	0·65	+0·14	8‡	15‡
	Loughborough	56	35	52·0	44·3	48·2	+ 8·3	43	0	3	0·61	+0·03	*	*
	Cheadle	55	34	51·2	41·6	46·4	+ 7·2	32	1	6	0·83	+0·09	*	*
	Churchstoke	54	36	51·3	43·0	47·2	+ 7·8	36	0	6	1·05	+0·26	8	13
	Hereford	57	37	52·9	44·4	48·7	+ 8·5	47	0	3	1·07	+0·52	*	*
	Cirencester	54	37	50·7	42·9	46·8	+ 7·0	34	0	2	0·95	+0·25	10	18
	Oxford	55	38	51·9	44·4	48·2	+ 7·8	43	0	2	0·60	+0·03	13	23
5. ENGLAND, S.	London	57	40	53·1	45·7	49·4	+ 8·4	52	0	2	0·54	+0·05	6‡	11‡
	Strathfield Turgiss	56	39	53·0	45·2	49·1	+ 8·5	50	0	2	0·65	+0·07	*	*
	Dungeness	57	40	53·4	48·0	50·7	+ 7·7	61	0	4	0·19	−0·62	*	*
	Hastings (St. Leonard's)	56	39	52·5	46·1	49·3	+ 6·3	51	0	3	0·32	−0·40	7	11
	Southampton	56	40	54·3	46·3	50·3	+ 8·5	58	0	3	0·84	+0·14	10	18
	Hurst Castle	56	42	54·0	47·6	50·8	+ 7·3	62	0	5	0·71	+0·02	*	*
	Stowell	54	39	51·4	44·3	47·9	+ 7·1	41	0	7	1·29	?	6‡	9‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	58	33	51·0	37·7	44·4	+ 3·4	35	12	7	5·22†	+3·01	*	*
	Glasgow	54	35	48·3	39·7	44·0	+ 4·2	24	6	7	2·70	+1·82	1	1
	Ardrossan	53	38	50·0	42·7	46·4	+ 6·5	31	0	7	2·20	+1·39	*	*
	Glenlee	55	33	49·5	40·0	44·8	+ 6·8	28	6	7	4·27	?	*	*
	Douglas (Isle of Man)	54	38	51·1	44·2	47·7	+ 5·8	40	0	6	0·87	−0·19	8	14
7. ENGLAND, N.W.	Newton Reigny (Penrith)	54	34	49·7	40·8	45·3	+ 5·8	28	3	7	2·76	+1·96	5	9
	Barrow-in-Furness	53	38	50·4	45·3	47·9	+ 5·4	41	0	7	0·98	+0·10	*	*
	Stonyhurst	56	35	50·6	42·8	46·7	+ 6·7	33	0	7	2·66	+1·56	5	8
	Blackpool	56	42	51·4	45·7	48·6	+ 6·1	46	0	7	1·30	+0·60	6	11
	Manchester	56	36	52·1	43·1	47·6	+ 6·6	39	0	6	2·13	+1·28	*	*
	Liverpool Obsy (Bidston)	58	38	52·9	45·6	49·3	+ 7·4	51	0	5	0·84	+0·20	*	*
	Llandudno	58	38	53·0	44·9	49·0	+ 5·6	49	0	6	0·99	+0·19	3	5
	Holyhead	56	40	52·6	46·7	49·7	+ 4·8	54	0	6	0·97	+0·03	*	*
8. ENGLAND, S.W.	Llandovery	55	36	52·1	43·0	47·6	+ 6·1	39	0	7	1·69	+0·51	*	*
	Pembroke	54	?40	52·7	46·9	49·8	+ 5·7	55	0	4	1·41	+0·49	6	10
	Arlington (N. Devon)	54	37	51·0	43·4	47·2	+ 5·7	36	0	7	1·92	+0·50	*	*
	Cullompton	56	39	53·1	45·5	49·3	+ 6·8	51	0	6	1·13	+0·33	9	16
	Falmouth	56	43	53·3	46·9	50·1	+ 5·1	57	0	5	0·88	−0·37	14	24
	Plymouth	56	44	54·1	47·1	50·6	+ 6·6	60	0	3	1·18	+0·37	7	12
	Prawle Point	54	40	52·4	45·6	49·0	+ 4·9	49	0	5	0·57	?	*	*
9. IRELAND, N.	Malin Head	53	35	49·1	41·4	45·3	+ 3·5	26	2	7	2·21	?	*	*
	Londonderry	55	34	52·0	41·2	46·6	+ 5·1	36	2	7	1·83	+0·83	*	*
	Mullaghmore	55	37	51·7	43·4	47·6	+ 5·1	39	0	7	1·37	+0·27	*	*
	Belmullet	56	36	52·1	43·9	48·0	+ 3·3	42	0	7	1·08	?	*	*
	Markree Castle	55	34	50·7	42·5	46·6	+ 5·1	32	0	7	0·95	+0·14	8	14
	Brookeborough	54	34	50·5	40·5	45·5	+ 4·9	31	4	7	1·25	?	*	*
	Armagh	56	35	50·4	41·1	45·8	+ 4·4	30	3	7	0·88	+0·24	8	14
	Donaghadee	56	35	50·7	42·4	46·6	+ 4·6	32	0	7	0·70	0·00	*	*
	Edgeworthstown	54	32	49·9	40·7	45·3	+ 4·6	29	4	7	0·97	+0·14	*	*
10. IRELAND, S.	Dublin	58	37	52·7	44·2	48·5	+ 6·0	46	0	6	0·71	+0·09	9	16
	Parsonstown	55	32	50·9	42·9	46·9	+ 5·8	34	0	6	0·63	−0·02	6	10
	Kilkenny	57	33	51·4	44·1	47·8	+ 6·4	41	0	6	0·82	+0·22	*	*
	Waterford	55	33	51·9	43·9	47·9	+ 4·5	41	0	3	0·81	−0·09	*	*
	Roche's Point	56	38	52·7	46·0	49·4	+ 5·2	52	0	4	1·49	+0·42	*	*
	Valencia	56	38	52·7	46·7	49·7	+ 3·2	54	0	7	1·04	−0·25	5	9
	Killarney	57	30	53·1	44·0	48·6	+ 3·9	46	0	6	0·96	?	*	*
	Foynes	57	36	51·5	44·7	48·1	+ 5·6	43	0	6	0·71	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	57	45	54·4	49·0	51·7	+ 3·7	63	0	3	0·55	−0·34	*	*
	Jersey	56	46	55·3	49·9	52·6	+ 7·6	74	0	7	0·51	−0·48	12	20

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked S with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

ERRATUM.—The total fall of rain at Stowell for the week ending November 12th should be "3·29."

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 48.] *Second Series.* WEEK ENDING MONDAY, 3RD DECEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 192.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	55	22	43·4	32·1	37·8	1 below.	4	− 4	36	+ 8	1637	−231	833 *	+189
	1. SCOTLAND, EAST	58	21	45·0	32·0	38·6	1 above.	8	− 2	33	+ 4	1953	−420	798	+101
	2. ENGLAND, N.E.	57	33	47·6	38·9	43·3	4 above.	22	+10	9	−20	2090	−465	606	+ 10
	3. ENGLAND, EAST	55	29	48·5	38·7	43·6	4 above.	25	+11	9	−21	2604	−332	758	+132
	4. MIDLAND COUNTIES	54	28	48·6	37·7	43·1	4 above.	23	+12	12	−21	2478	−419	764	+120
	5. ENGLAND, SOUTH	56	32	51·0	41·2	46·1	5 above.	32	+13	2	−21	2803	−397	631	+168
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	58	28	46·5	38·3	42·4	3 above.	18	+ 4	10	−15	2185	−328	540	+ 35
	7. ENGLAND, N.W.	60	25	48·2	39·2	43·7	2 above.	24	+ 9	8	−14	2354	−328	543	+ 77
	8. ENGLAND, S.W.	56	27	51·1	40·4	45·8	3 above.	33	+10	4	− 9	2673	−442	511	+236
	9. IRELAND, NORTH	57	23	47·3	36·7	42·0	1 above.	15	− 1	15	− 8	2372	−241	444	+ 3
	10. IRELAND, SOUTH	60	25	49·6	37·5	43·6	1 above.	30	+ 6	13	− 6	2777	−213	381	+ 76
	— CHANNEL ISLANDS	57	43	54·1	46·5	50·3	4 above.	58	+23	0	− 5	3194	−250	247	+150

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 192.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of in.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	4	10	2 less.	221	+10	41·1 *	−0·6	7	14	1150	− 45	27	− 1
	1. SCOTLAND, EAST	6	15	8 more.	195	+17	20·3	−0·3	3	6	1207	−153	29	− 3
	2. ENGLAND, N.E.	6	9	2 more.	175	+ 1	24·9	−1·0	7	13	1084	−157	24	− 3
	3. ENGLAND, EAST	5	7	1 more.	176	− 3	23·7	−0·9	10	19	1221	−289	29	− 7
	4. MIDLAND COUNTIES	6	8	1 more.	164	− 9	24·7	−2·9	8	15	1136	−218	27	− 5
	5. ENGLAND, SOUTH	6	11	4 more.	171	+ 6	26·8	+0·6	7	12	1202	−248	29	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	5	25	7 more.	183	− 8	42·5	−0·9	4	7	1251	− 51	30	− 1
	7. ENGLAND, N.W.	5	11	2 more.	185	+ 6	29·4	−4·7	5	9	1168	−134	28	− 3
	8. ENGLAND, S.W.	7	13	8 more.	191	+ 1	35·6	−5·0	12	20	1410	−151	34 †	− 3
	9. IRELAND, NORTH	6	13	5 more.	197	−16	33·9	+0·1	3	5	1132	− 99	27	− 2
	10. IRELAND, SOUTH	6	21	12 more.	178	−20	35·1	−1·6	3	6	1336	− 70	32	− 1
	— CHANNEL ISLANDS	7	10	1 more.	209	+ 3	29·0	−2·3	20	33	1645	−203	39	− 5

General Remarks.

Weather has remained in a dull, rough, and unsettled condition very generally, with a good deal of rain over England and Ireland, and falls of snow, sleet, and rain over Scotland. Thunder and lightning were experienced during the earlier part of the period in almost all districts.

Temperature has been lower than it was during last week, but in all districts excepting "Scotland, N." it has still been above the mean. Over the greater part of England an excess of 3° or 4° is shown, and in "England, S." 5°. The highest of the maxima were generally recorded either on December 2nd or 3rd, when they varied from 55° in "Scotland, N." and "England, E." to 58° in "Scotland, E." and "Scotland, W.", and to 60° in "England, N.W." and "Ireland, S." The lowest of the minima, which were registered during the earlier part of the period, ranged from 21° to 28° in Scotland, from 23° to 25° over Ireland, and from 25° to 33° over England.

Rainfall has been rather less than the mean in "Scotland, N.", but more in all other parts of the Kingdom; in the east and west of Scotland, the south-west of England, and the south of Ireland the excess has been large.

Bright sunshine has continued very deficient generally. In the "Channel Islands" the percentage of the possible amount of duration has been 33; over England it has ranged from 9 to 20, in Scotland from 6 to 14, and in Ireland from 5 to 6.

Depressions observed.—During the earlier days of the period a well defined and deep depression travelled in a north-easterly direction from the south of Ireland to Scandinavia, and caused fresh South-Westerly gales in many parts of England, and a strong Easterly gale on the east coast of Scotland. By the 29th another depression lay off the south of Ireland, but this subsequently moved away north-westwards to the Atlantic, while a small shallow system reached the south-east of England from the south-westward and disappeared over the North Sea. Towards the end of the period the barometer rose steadily over the south-eastern parts of our area, and large depressions skirted our extreme western and north-western coasts.

* This value has been altered slightly owing to the receipt of further information.

† The corresponding value in last week's Report should read "34".

A 56633. 350.—12/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m. | **6 p.m.**

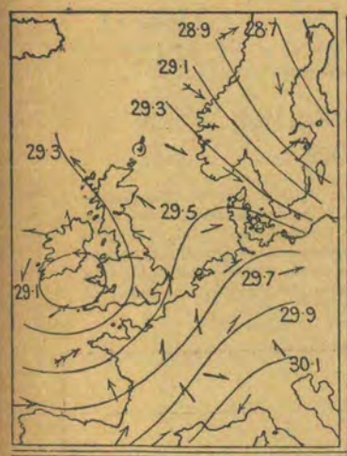
Weather

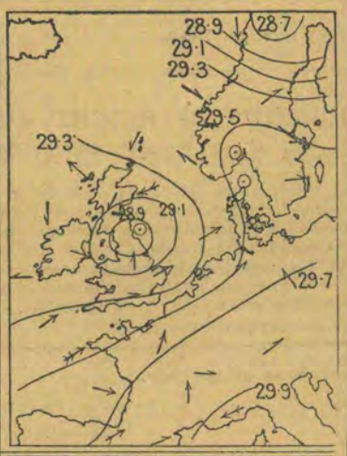
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, November 27.

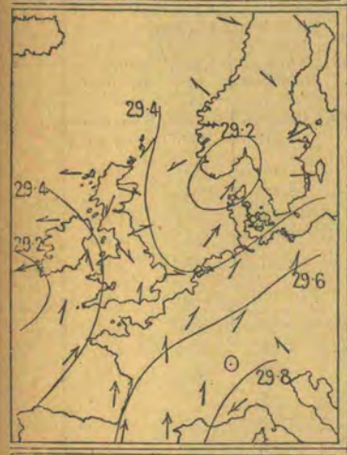
Weather rainy over the greater part of England as well as in the south of Ireland and north of France, but fair or fine in most other localities. Some improvement taking place later in south, but cold showers falling in Scotland. Lightning seen in the south of England at night.

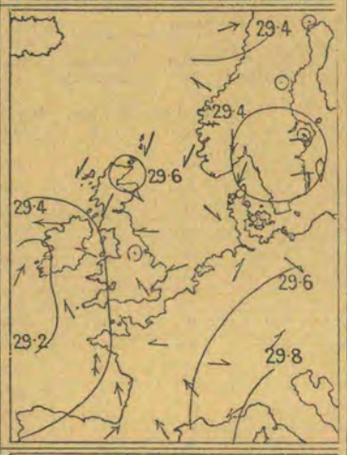
Temperature fallen several degrees in the north of our Islands, but risen elsewhere. Sharp frost occurring in Scotland in early morning. Maximum readings exceeding 55° in the extreme south of England.

Wind strong to a gale from the South-Westward on our southern coasts, but light or moderate from South-East in the north. Strong from West or North-West at the Scandinavian stations. Subsequently increasing to a strong gale from East in the east of Scotland.

Sea high at the mouth of the Channel, and rough in the south-west and south generally.

Barometer falling at all but the Scandinavian and Danish stations. Pressure highest over the south-east of France, and lowest over the north of Sweden, but well-marked depression lying off the south-east of Ireland. Depression subsequently moving north-eastwards to the north of England, and barometer rising in south.





Wednesday, November 28.

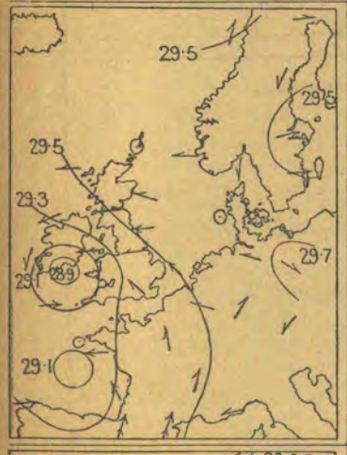
Weather fine over England and the north of Ireland, but cloudy elsewhere, with showers on our extreme south-west coasts. Heavy rain falling later at several of our south-western stations, and thunderstorms occurring in the south of England.

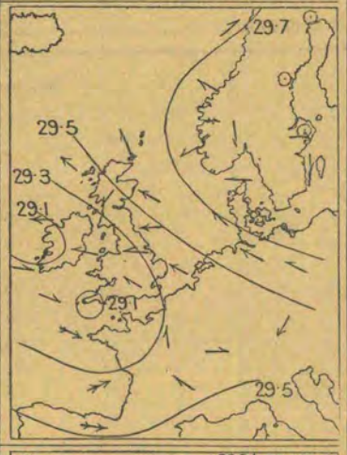
Temperature fallen in most places—quickly over England. Frost occurring in many districts in early morning, and maximum readings below 50° on all but our extreme south and south-west coasts.

Wind strong from South over the Bay of Biscay, and fresh from South-East on our western coasts, but moderate from West in the east of Great Britain, and light from the Eastward over Scandinavia.

Sea high at Aberdeen and rough on our south-west coasts, as well as in the Bay of Biscay.

Barometer rising in the north and east of our Islands, but fallen elsewhere. Depression of previous day now lying off south of Norway, but new disturbance appearing off our south-west coasts. Latter system subsequently moving north-westwards to the Atlantic.





Thursday, November 29.

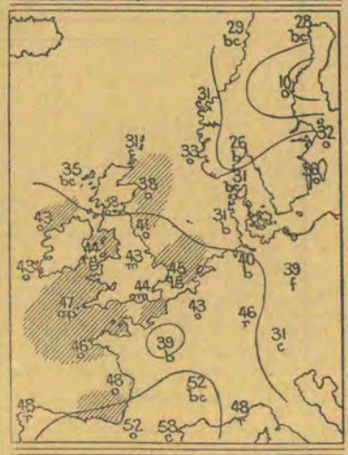
Weather fine in Denmark and the northern parts of Scandinavia and Germany, but cloudy elsewhere, with rain at many of our western stations, and thunder at Lorient. Rain falling later on all but our extreme northern coasts, with thunder and lightning at Hurst Castle.

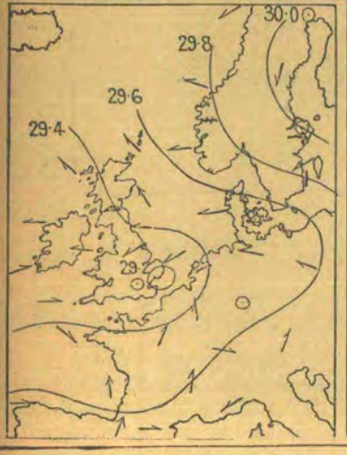
Temperature risen in our Islands, but fallen at most of the Continental stations. Frost occurring over Scotland in early morning, and maximum readings below 50° on all but our extreme southern coasts.

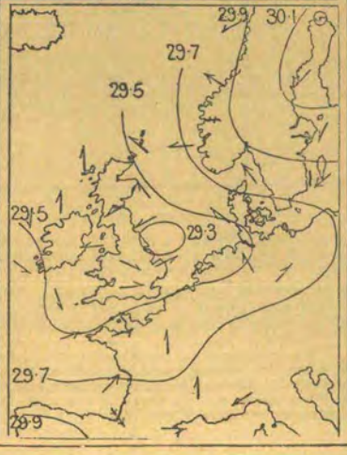
Wind fresh or strong from the Southward or South-Eastward on our southern and the French coasts, but moderate from the Eastward in the north of our Islands, and variable or light from the Westward in Scandinavia. Subsequently veering to the Westward in the west of France.

Sea rough or rather so on all but our extreme northern coasts.

Barometer falling over Ireland, England, and France, but rising elsewhere. Area of high pressure extending from Central Europe across the North Sea. Well marked and rather deep depression lying off the south-east of Ireland, with a shallower disturbance over the Bay of Biscay. Former disturbance subsequently travelling away north-westwards, and latter advancing to the south-west of England.







Friday, November 30.

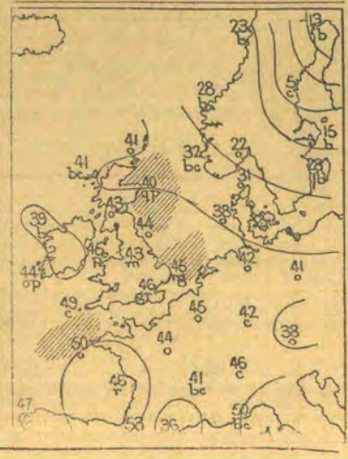
Weather fair in Scandinavia, France, and the west and south of our Islands, but dull elsewhere, with rain over the inland parts of England. Thunderstorms occurring later at some of the French stations.

Temperature fallen rapidly in Sweden and the south of France, and to a less extent in Ireland, but risen slightly elsewhere. Maximum readings below 50° on all but our extreme southern coasts.

Wind moderate Westerly or South-Westerly at our southern and the French stations, but strong from the South-Eastward in the north of our Islands.

Sea rather rough on most parts of our north and east coasts, but moderate to smooth elsewhere.

Barometer rising in the west and south, but falling elsewhere. Pressure highest over the Gulf of Bothnia, with a small shallow depression over the south-east of England, and a long trough of low readings over Ireland and all the more southern parts of England. Depression in south-east subsequently moving away to North Sea.

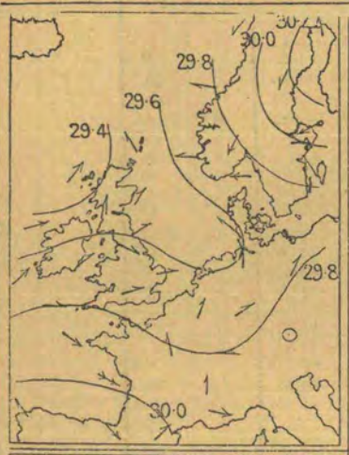


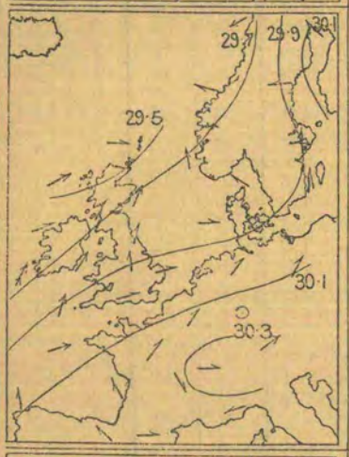
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

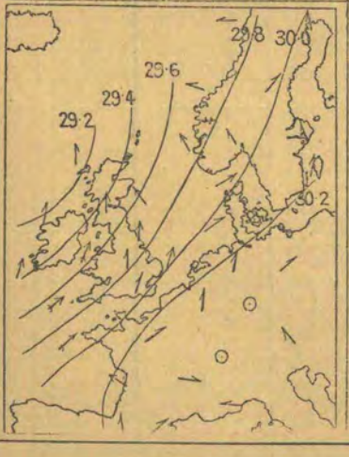
Synoptic Charts.

PRESSURE AND WIND.

8 a.m.







6 p.m.

Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, December 1.

Weather dull in Sweden, Denmark, and the extreme west of our Islands, but fine in most other localities. Rain falling later at several of our western and northern stations.

Temperature risen in Scandinavia, Denmark, and the west of our Islands, but fallen elsewhere. Frost occurring in many parts of Great Britain in early morning, but maximum readings a little higher than on previous day.

Wind fresh from the South-Westward on our western coasts, but light from West in the south and east, and strong from the same quarter over the Bay of Biscay. Easterly breezes reported in Scandinavia.

Sea rough at some of our western and northern stations, but moderate to smooth elsewhere.

Barometer rising at all but our extreme northern stations. Pressure still highest over the Gulf of Bothnia, but high over Spain and the south of France, with a depression off the west of Scotland, and a shallow disturbance over the North Sea. Depression in north-west travelling away to the northward of our Islands.

Sunday, December 2.

Weather fine in France, the south-east of England, and the north and east of Scotland, but cloudy elsewhere, with rain on our extreme north-west coasts. Rain falling later in most parts of our Islands; heavily in the west.

Temperature risen at all but the southern French stations. Maximum readings a little above 55° on our extreme south-west coasts, and above 50° generally.

Wind South-Westerly over the United Kingdom, but South-Easterly or Easterly in Scandinavia and the south of France; strong in force on our extreme south-west coasts. Subsequently increasing to a gale at the mouth of the Channel.

Sea rough at some of our western and northern stations, but moderate to smooth elsewhere.

Barometer rising at all but the Scandinavian and our extreme western stations. Anticyclone lying over central France, with a depression off the north of Scotland. New disturbance appearing later off our extreme western coasts.

Monday, December 3.

Weather fine over France, the Netherlands, and the south-east of England, but cloudy elsewhere, with rain at many of our western and northern stations. Rain extending later to all but our extreme south-east coasts.

Temperature risen generally. Maximum readings above 55° at many of our western and northern stations.

Wind South-Easterly in Scandinavia and the south of France, but Southerly or South-Westerly elsewhere: strong in force in our Islands, with gales in the west.

Sea high at Pembroke and Brest, and rough, or rather so, on nearly all parts of our coasts.

Barometer falling at all but the Swedish, Danish, and German stations. Large anticyclone lying over France and South Germany, with a large and rather deep depression off the west of Scotland. Depression subsequently travelling away north-eastwards, and barometer rising on our western coasts.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟹ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

DATE OF REPORT.	NAMES OF STATIONS.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending Nov. 26 - -	Sumburgh Head - - -	51	33	46·0	36·6	41·3	+ 0·3	11	22	7	1·50	+0·60	*	*

III.—DATA from which the SUMMARY on page 189 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ⚓	49	27	41·7	34·9	38 3	− 2·5	0	26	4	0·66	−0·33	*	*
	Stornoway ⚓	52	27	45·1	34·9	40·0	− 0·2	9	27	5	2·11	+0·99	7	15
	Wick ⚓	53	23	44·3	32·1	38·2	− 1·6	6	36	3	0·14	−0·57	*	*
	Lairg ⚓	55	22	41·4	27·7	34·6	− 3·5	0	52	3	0·19	−0·76	*	*
	Glencarron ⚓	55	25	42·9	30·9	36·9	− 0·6	3	39	5	1·96†	?	6	13
	Fort Augustus ⚓	55	25	45·0	?31·9	?38·5	?− 0·2	8	?38	5	1·03†	?	*	*
1. SCOTLAND, E.	Nairn ⚓	56	25	44·6	28·7	36·7	− 2·1	7	49	5	0·24	−0·27	*	*
	Aberdeen ⚓	54	27	45·0	31·9	38·5	0 0	8	38	6	1·02	+0·27	2	4
	Braemar ⚓	54	21	42·3	28·8	35·6	+ 1·4	1	47	5	1·35	+0·55	1‡	2‡
	Ochtertyre ⚓	55	29	44·4	31·7	40·6	+ 3·4	12	20	6	3·09	+2·09	*	*
	Leith ⚓	58	30	43·0	35·6	41·8	+ 2·8	17	27	5	0·89	+0·41	*	*
	Marchmont ⚓	54	28	43·7	32·4	38·1	+ 1·0	5	35	7	2·57	+1·77	5	11
2. ENGLAND, N.E.	Alnwick Castle ⚓	56	35	46·3	40·0	43·2	+ 4·3	17	6	6	1·59	+0·84	*	*
	Durham ⚓	55	33	46·6	38·0	42·3	+ 3·3	19	11	6	0·71	+0·01	6	12
	Shields ⚓	56	34	48·7	36·7	42·7	+ 2·5	27	15	5	0·73	+0·12	*	*
	Scarborough ⚓	54	36	46·8	40·7	43·8	+ 4·3	18	4	6	0·94	+0·23	7‡	13‡
	York ⚓	57	33	49·0	36·9	43·0	+ 3·5	28	14	5	0·42	−0·10	8	15
	Spurn Head ⚓	52	37	48 1	40·9	44·5	+ 4·5	22	3	6	0·72	?	*	*
3. ENGLAND, E.	Hillington ⚓	52	32	47·8	39·5	43·7	+ 4·5	22	7	5	0·54	−0·07	14	26
	Yarmouth ⚓	51	36	47·7	38·6	43·2	+ 3·2	23	10	6	0·77	+0·06	*	*
	Geldeston ⚓	53	35	48·8	40·8	44·8	+ 4·8	25	3	4	0·91	+0·31	12	21
	Cambridge ⚓	55	31	49·1	36·6	42·9	+ 3·6	29	15	4	0·39	−0·06	8	15
	Rothamsted ⚓	53	29	48·5	38·9	43·7	+ 4·7	25	9	6	0·53	−0·07	*	*
	Ingatestone ⚓	53	34	48·8	37·9	43·4	+ 3·7	27	11	5	0·89	+0·38	7‡	13‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	56	32	49·1	36·3	42·7	+ 2·5	29	16	6	0·36	−0·17	10‡	19‡
	Loughborough ⚓	55	30	49·4	36·7	43·1	+ 4·1	30	15	5	0·50	−0·03	*	*
	Cheadle ⚓	53	30	46·9	38·0	42·5	+ 3·9	20	11	5	0·45	−0·29	*	*
	Churchstoke ⚓	55	29	48·0	39·5	43·8	+ 4·8	23	7	6	0·76	+0·02	8	15
	Hereford ⚓	54	30	49·1	38·3	43·7	+ 4·2	27	10	6	0·88	+0 33		
	Cirencester ⚓	53	28	48·5	35·9	42 1	+ 2·9	25	17	6	1·37	+0·68	7	13
	Oxford ⚓	54	33	49·3	38·9	44·1	+ 4·1	23	9	6	0·94	+0·44	8	14
5. ENGLAND, S.	London ⚓	55	36	50·4	40·7	45·6	+ 5·4	31	4	6	1·21	+0·72	5‡	8‡
	Strathfield Turgiss ⚓	54	32	49·8	37·2	43·5	+ 3·5	31	13	6	1·08	+0·54	*	
	Dungeness ⚓	55	34	52·3	43·9	48·1	+ 5·9	43	0	6	0·61	−0·18	*	*
	Hastings (St. Leonard's) ⚓	56	39	51·6	43·4	47·5	+ 5·3	39	0	7	0·48	−0·22	11	19
	Southampton ⚓	56	33	51·0	40·8	45·9	+ 5·4	32	3	6	1·48	+0·78	7	12
	Hurst Castle ⚓	56	36	52·6	43·4	48·0	+ 5·1	42	0	7	1·27	+0·59	*	*
	Stowell ⚓	53	33	49·3	38·7	44·0	+ 4·0	28	9	7	1·27	?	5‡	8‡
6. SCOTLAND, W.	Laudale (Loch Sunart) ⚓	58	32	46·9	38·8	42·9	+ 2·4	20	9	3	3·18†	+0·98	*	*
	Glasgow ⚓	55	33	45·3	37·8	41·6	+ 2·1	9	17	5	1·65	+0·75	1	2
	Ardrossan ⚓	52	33	45·4	37·9	41·7	+ 2·2	10	17	5	1·32	+0·42	*	*
	Glenlee ⚓	55	28	46·4	34·7	40·6	+ 2·6	12	29	3	4·43	?	*	*
	Douglas (Isle of Man) ⚓	54	35	48·3	42·1	45·2	+ 3·7	22	0	5	2·07	+1·02	6	11
7. ENGLAND, N.W.	Newton Reigny (Penrith) ⚓	55	25	45·4	35·1	40·3	+ 1·4	10	27	5	2·14	+1·34	7	13
	Barrow-in-Furness ⚓	52	33	47·0	38·0	42·5	+ 0·5	20	11	3	1·66	+0·81	*	*
	Stonyhurst ⚓	54	31	47·3	38·7	43·0	+ 3·6	21	9	6	1·01	−0·09	3	6
	Blackpool ⚓	55	32	48·7	38·4	43·6	+ 1·6	26	10	3	0·64	−0·14	4	7
	Manchester ⚓	54	31	48·3	39·2	43·8	+ 3·6	24	8	5	0·46	−0·33	*	*
	Liverpool Obsr (Bidston) ⚓	56	36	49·4	40·4	44·9	+ 3·8	27	4	6	0·50	−0·13	*	*
	Llandudno ⚓	60	35	50·4	42·1	46·3	+ 3·7	30	0	6	0·51	−0·27	5	8
	Holyhead ⚓	54	36	48·3	41·7	45·5	+ 1·2	26	1	7	1·57	+0·70	*	*
8. ENGLAND, S.W.	Llandovery ⚓	56	30	50·6	37·6	44·1	+ 3·2	33	12	7	2·74	+1·54	*	*
	Pembroke ⚓	54	38	50 9	41·6	47·3	+ 3·5	37	0	7	2·20	+1·29	7	13
	Arlington (N. Devon) ⚓	54	32	49·7	38·6	44·2	+ 3·0	30	10	7	1·34	−0·03	*	*
	Cullompton ⚓	55	27	51·1	36 3	43·7	+ 1·7	36	16	6	1·82	+1·02	8	14
	Falmouth ⚓	55	40	51·5	43·8	47·7	+ 2·8	40	0	7	2·16	+0·92	17	29
	Plymouth ⚓	56	34	52·0	40·8	46·4	+ 2·8	36	3	7	1·79	+0·97	14	25
	Prawle Point ⚓	54	38	51·9	41·9	46·9	+ 3·3	35	0	6	1·05	?	*	*
9. IRELAND, N.	Malin Head ⚓	54	32	46·7	38·3	42·5	+ 1·5	19	10	5	0·86	?	*	*
	Londonderry ⚓	57	31	46·5	36·4	41·5	+ 0·5	13	23	6	1·21	+0·24	*	*
	Mullaghmore ⚓	57	33	49·0	37·7	43·4	+ 1·4	23	12	6	1·33	+0·28	*	*
	Belmullet ⚓	54	34	48·7	38·6	43·7	− 0·3	26	10	6	1·54	?	*	*
	Markree Castle ⚓	56	23	46·6	34·7	40·7	− 0·4	13	29	6	1·00	+0·20	4	8
	Brookeborough ⚓	55	24	45·4	34·8	40·1	+ 0·1	10	28	6	1·93	?	*	*
	Armagh ⚓	57	27	47·3	38·4	42·9	+ 1·9	21	10	6	1·50	+0·85	1	2
	Donaghadee ⚓	56	32	48·7	37·4	43·1	+ 1·2	27	13	7	0·93	+0·23	*	*
	Edgeworthstown ⚓	56	23	46·6	34·1	40·4	+ 0·3	13	31	6	1·47	+0·67	*	*
10. IRELAND, S.	Dublin ⚓	60	31	45·0	40·8	44·9	+ 2·9	25	3	6	2·84	+2·31	1	2
	Parsonstown ⚓	55	26	48·9	34·0	41·5	+ 0·9	19	33	5	0·86	+0·22	7	13
	Kilkenny ⚓	57	25	48·6	32·4	40·5	− 0·4	18	38	5	1·24	+0·60	*	*
	Waterford ⚓	55	27	50·0	35·3	42·7	− 0·1	33	19	6	2·04	+1·13	*	*
	Roche's Point ⚓	55	33	49·6	38·6	44·1	+ 0·4	29	10	5	3·04	+1·97	*	*
	Valencia ⚓	57	36	51·4	41·6	46·5	+ 0·5	33	1	7	1·78	+0·49	2	3
	Killarney ⚓	57	30	49·4	36·7	43·1	− 0·9	30	15	6	3·23	?	*	*
	Foynes ⚓	58	32	49·7	40·9	45·3	+ 3·1	28	3	6	1·39	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's) ⚓	57	43	53·6	43·0	49·8	+ 2·2	55	0	7	1·32	+0·43	*	*
	Jersey ⚓	56	44	54·6	46·9	50·8	+ 6·3	62	0	6	0·76	−0·23	20	33

Stations marked ⚓ are in connection with the Royal Meteorological Society, and those marked ⚓ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
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VOL. V. No. 49.] *Second Series.* WEEK ENDING MONDAY, 10TH DECEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

DISTRICTS. (See p. 196.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
	°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	58	31	48·2	40·6	44·5	5 above.	23	+16	4	−27	1630	−211	837	+152
1. SCOTLAND, EAST	57	28	48·7	41·1	45·1	8 above.	25	+17	3	−34	1978	−400	801	+ 58
2. ENGLAND, N.E.	59	26	49·5	41·3	45·6	7 above.	28	+18	2	−31	2118	−444	608	− 31
3. ENGLAND, EAST	59	26	49·7	39·6	44·9	6 above.	30	+19	7	−27	2634	−311	765	+ 94
4. MIDLAND COUNTIES	59	24	50·1	40·8	45·6	6 above.	30	+18	3	−33	2508	−398	767	+ 72
5. ENGLAND, SOUTH	58	24	50·7	43·2	47·1	6 above.	36	+20	0	−26	2830	−373	631	+131
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	55	27	50·0	42·4	46·4	7 above.	31	+19	0	−27	2216	−305	540	− 5
7. ENGLAND, N.W.	58	26	50·2	43·2	46·8	6 above.	34	+21	0	−25	2388	−302	543	+ 42
8. ENGLAND, S.W.	57	25	51·4	44·1	47·9	5 above.	41	+22	0	−14	2714	−416	511	+210
9. IRELAND, NORTH	57	22	50·0	39·7	45·0	4 above.	31	+15	6	−20	2403	−219	450	− 32
10. IRELAND, SOUTH	60	24	51·3	41·7	46·7	4 above.	34	+12	1	−21	2811	−192	382	+ 45
— CHANNEL ISLANDS	57	41	52·7	46·7	49·8	4 above.	55	+24	0	− 6	3249	−219	247	+141

Rainfall. Bright Sunshine.

DISTRICTS. (See p. 196.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
		10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts. 0. SCOTLAND, NORTH	5	6	5 less.	226	+ 9	41·7	−1·1	6	14	1156	− 50	27	− 1
1. SCOTLAND, EAST	3	2	5 less.	198	+15	29·5	−0·8	6	13	1213	−159	28	− 4
2. ENGLAND, N.E.	2	1	6 less.	177	− 2	25·0	−1·6	13	26	1097	−152	23	− 3
3. ENGLAND, EAST	3	2	3 less.	179	− 5	23·9	−1·3	15	28	1236	−284	29	− 7
4. MIDLAND COUNTIES	3	5	1 less.	167	−10	25·2	−3·0	14	27	1150	−213	27	− 5
5. ENGLAND, SOUTH	3	3	3 less.	174	+ 5	27·1	+0·3	14	26	1216	−242	29	− 5
Principal Grazing, &c. Districts. 6. SCOTLAND, WEST	4	9	3 less.	187	− 8	43·4	−1·1	7	15	1258	− 55	29	− 2
7. ENGLAND, N.W.	3	4	4 less.	188	+ 5	29·8	−5·1	12	22	1180	−129	28	− 3
8. ENGLAND, S.W.	4	7	4 less.	195	+ 1	36·3	−5·4	13	24	1423	−153	34	− 3
9. IRELAND, NORTH	5	8	0 (average).	202	−15	34·7	+0·1	15	28	1147	− 97	27	− 2
10. IRELAND, SOUTH	5	15	7 more.	183	−19	36·6	−0·9	16	30	1352	− 67	32	− 1
— CHANNEL ISLANDS	5	6	3 less.	214	+ 3	29·6	−2·6	16	28	1661	−199	39	− 5

General Remarks.

Weather has been fairer than of late over our Islands generally, but in Ireland considerable quantities of rain have again fallen. In the Metropolis and some other parts of England thick fogs prevailed at the close of the period.

Temperature continued much above the mean until the 8th, when it fell very decidedly. The average for the week has been 4° above the mean for the time of year in Ireland, from 5° to 7° above in England, and 5° to 8° in Scotland. The highest of the maxima were generally recorded on the 5th, when they varied from 55° in "Scotland, W." to 60° in "Ireland, S." On the 10th the maxima in some of the south-eastern and central parts of England were very low; at Loughborough and Cambridge the thermometer did not rise above 31°, and in the south of London 33°. The lowest of the minima, which were registered on the 10th, varied from 22° in "Ireland, N." to 31° in Scotland, N.", and to 41° in the "Channel Islands". During the greater part of the time the minima over the Kingdom generally were about 50°.

Rainfall has been less than the mean over Great Britain, and about equal to it in "Ireland, N.", but in "Ireland, S." a decided excess is shown.

Bright sunshine has been more prevalent generally than for some time past, but the percentage of the possible amount of duration has continued rather low; in Scotland it ranged from 13 to 15, in Ireland from 28 to 30, and in England from 22 to 28.

Depressions observed.—During the greater part of the period depressions continued to move north-eastwards outside the Irish and Scotch coasts, causing strong Southerly to South-Westerly winds or gales in the west and north, and fresh breezes from the same quarters in other parts of our Islands. Towards the end of the time, however, a "V shaped" system passed over Ireland and England, and, the barometer rising briskly in its rear, the conditions over the United Kingdom became anticyclonic, although in the extreme west and south-west pressure seemed inclined to give way again.

A 56746. 350.—12/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m.	6 p.m.

Weather

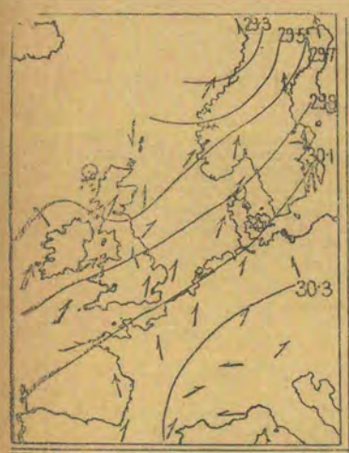
During the 24 hours succeeding

8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Tuesday, December 4.

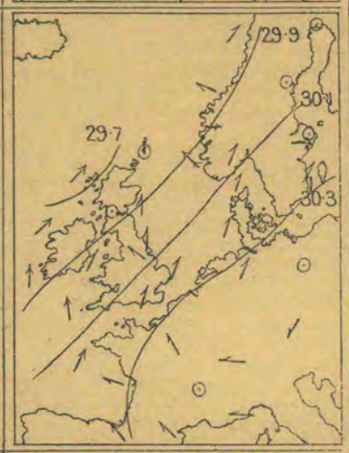
Weather dull and rainy in the extreme south of our Islands and the west of Norway, but fair or fine elsewhere. Rain falling later at several of our western stations.

Temperature risen in Scandinavia and the west of France, but fallen elsewhere. Maximum readings above 55° over eastern and central England, highest being 59° at Loughborough and Cambridge.

Wind fresh Southerly or South-Westerly at all but our extreme northern stations, where light and variable. Subsequently backing to South-East in the extreme west and south-west of our Islands.

Sea rather rough on our south and south-west coasts, but moderate to smooth elsewhere.

Barometer rising at all but the Swedish, Danish, and German stations. Anticyclone lying over South Germany and the east of France, with a large and rather deep depression off the north-west of Norway. New disturbance appearing later off the west of Ireland.



Wednesday, December 5.

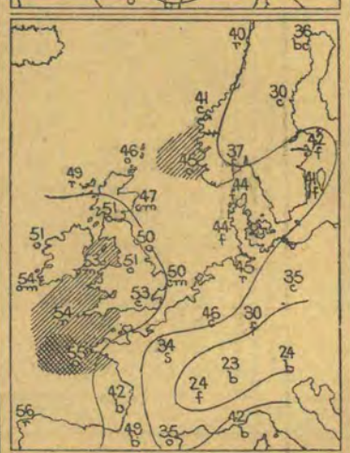
Weather dull in our Islands, with rain in the west of England, and foggy at many of the Continental stations. Sky subsequently clearing in east and south-east, but rain falling in north.

Temperature risen a little in our Islands and Denmark, but fallen elsewhere. Maximum readings above 55° in many parts of Great Britain.

Wind chiefly Southerly, but Westerly in the north of Scandinavia and easterly in the south of France; strong in force at some of our western and northern stations, but light to fresh elsewhere.

Sea rough on our south-west coasts, but moderate to smooth elsewhere.

Barometer rising at all but the English and Scotch stations. Large anticyclone lying over South Germany and the east of France, with a depression off our extreme north-west coasts. Depression subsequently moving northwards, and barometer rising generally.



Thursday, December 6.

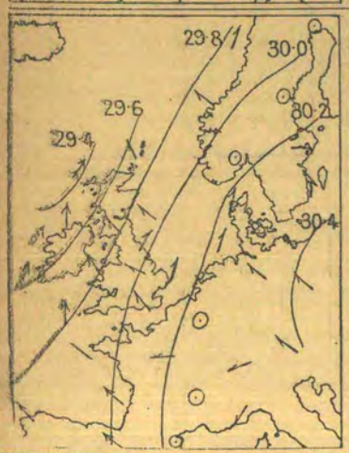
Weather foggy and damp on our south and south-west coasts, but fine in the north and east of our Islands. Fog also reported over the south of Scandinavia, North Germany, and the east of France. Heavy rain falling at some of our western stations later.

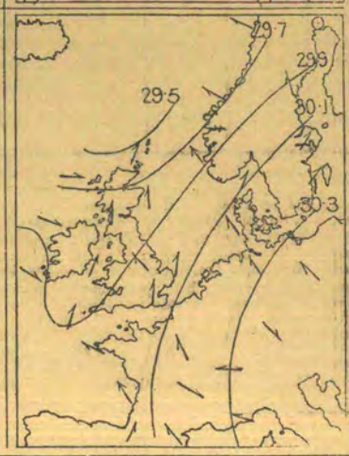
Temperature fallen generally but maximum readings still a little above 55° in various parts of Great Britain.

Wind South-Easterly on the west coasts of Norway and France, but Southerly or South-Westerly elsewhere; light or moderate in force generally in morning, but subsequently increasing to a gale at some of the Irish stations.

Sea rather rough on our south-west coasts, but moderate to smooth elsewhere.

Barometer rising in most parts of our Islands and Germany, but falling in Scandinavia and France. Anticyclone still lying over South Germany and the east of France, with a large area of low pressure to the westward of Norway. Depression subsequently approaching Ireland from the south-westward.





Friday, December 7.

Weather rainy on our extreme north-west coasts, and foggy over Germany and Belgium, but fair or fine elsewhere. Rain falling later at all our western stations.

Temperature risen a little in Ireland, Scotland, and the north of Scandinavia, but fallen elsewhere. Maximum readings lower than on two previous days, but thermometer reaching 55° at Loughborough and in London.

Wind chiefly Southerly (South-East to South-West), strong in force in the west and north, but light or moderate elsewhere. Subsequently veering to the Westward or North-Westward in Ireland.

Sea rough on our south-western and extreme northern coasts.

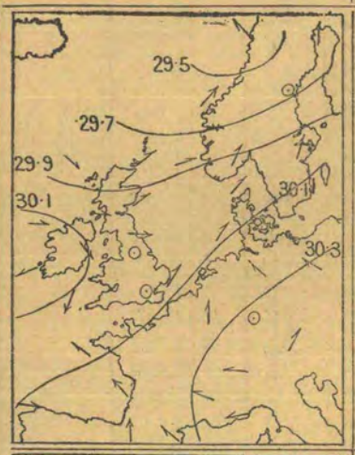
Barometer falling at all but the Swedish stations. Anticyclone lying over Germany, with a large and rather deep depression off the north-west of Scotland. Depression subsequently moving northwards, and barometer rising on our western and northern coasts.

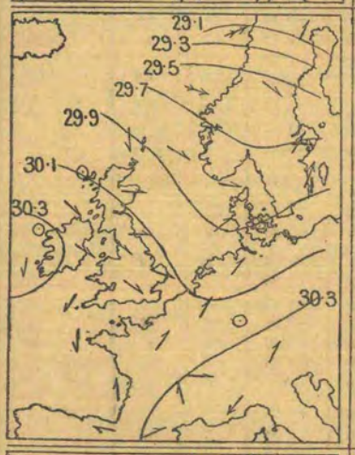
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

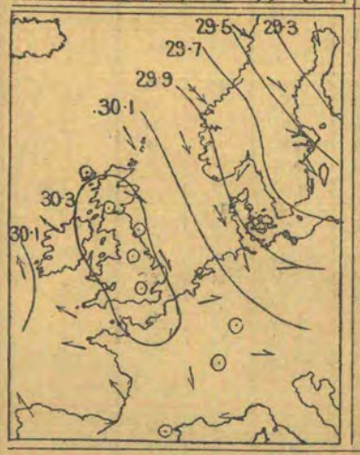
Synoptic Charts.

PRESSURE AND WIND.

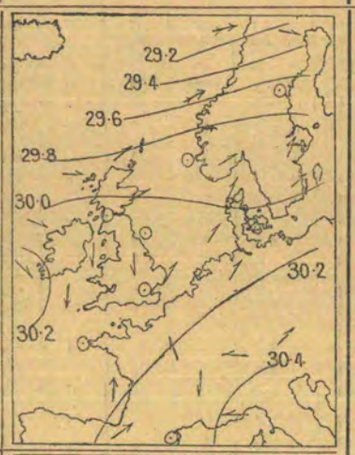
8 a.m.

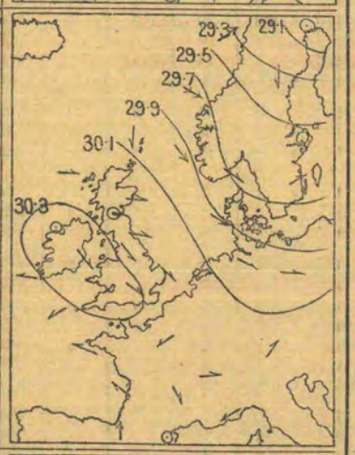


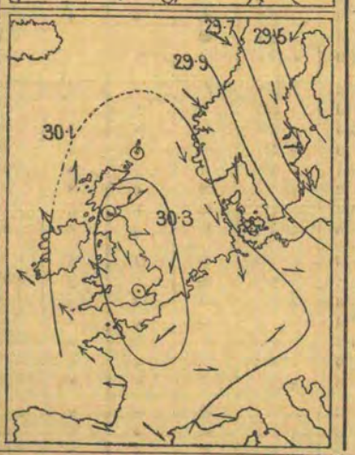




6 p.m.







Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, December 8.

Weather rainy over central England and the west of Norway, and foggy over Holland and Germany, but fair or fine elsewhere. Rain extending later to our eastern and southern stations.

Temperature fallen at all but the English and French stations. Frost occurring over central Ireland in morning and daily maxima below 50° in all but our extreme southern districts.

Wind light Westerly or South-Westerly in the north of our Islands, and moderate Southerly or South-Easterly over France and Germany, but variable over our more central districts.

Sea rather rough at some of our south-western and extreme northern stations.

Barometer falling in Scandinavia and Denmark, but rising elsewhere. Depression of previous day now lying off the north-west of Norway. Anticyclone over Germany giving way, but new high pressure system advancing over our western districts.

Sunday, December 9.

Weather fine in our Islands and the east and south of France, but cloudy or overcast elsewhere. Fog setting in later over central England.

Temperature fallen at all but the Danish, North German, and eastern French stations. Ground frost occurring in many parts of our Islands in early morning. Maximum readings below 50° in most places and below 45° at some of our western and northern stations.

Wind light from the North-Westward over the greater part of our Islands, but Westerly or South-Westerly in Scandinavia, Denmark, and Germany, and South-Easterly in the south of France. Subsequently shifting to East on our south-west coasts.

Sea rough off the west of Norway, but moderate to smooth elsewhere.

Barometer rising in our Islands, but falling at most of the Continental stations. Anticyclone in west continuing to spread eastwards, but Continental high pressure system gradually breaking up.

Monday, December 10.

Weather fair generally, but foggy over England and the south of Scotland. Rain setting in later in the west and south of Ireland. Aurora seen in north of Scotland at night.

Temperature risen several degrees in the south of Ireland, but fallen elsewhere. Sharp frost occurring over England in morning, and continuing in some of the central districts throughout day.

Wind fresh South-Easterly on our south-west coasts, but light and variable at our northern and central stations. Strong from the North-Westward on the eastern shores of the North Sea. Subsequently increasing to a strong breeze from South-East on many parts of our western coasts.

Sea high at Christiansund, and rough at Valencia, but moderate to smooth elsewhere.

Barometer rising in the north and east of our Islands as well as in Norway, but falling in most other localities. Elongated anticyclone lying over Great Britain and the north of France, with low pressures over the northern part of the Gulf of Bothnia. Depression subsequently appearing off the west of Ireland.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 193 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ℛ	51	33	46·1	40·9	43·6	+ 3·1	16	3	6	0·43	−0·56	*	*
	Stornoway ℛ	52	35	48·7	40·6	44·8	+ 4·8	25	4	7	1·20	0·00	10	23
	Wick ℛ	50	35	46·3	41·1	43·8	+ 4·2	16	3	1	0·09	−0·63	*	*
	Lairg ℛ	52	32	48·0	38·9	43·6	+ 5·5	24	9	5	0·27	−0·68	*	*
	Glencarron ℛ	58	31	49·1	40·3	44·9	+ 7·2	27	5	7	1·03†	?	2	4
	Fort Augustus ℛ	56	31	50·8	41·8	46·5	+ 7·8	32	1	6	0·66†	?	*	*
1. SCOTLAND, E.	Nairn ℛ	57	37	49·7	43·1	46·5	+ 7·9	32	0	2	0·09	−0·41	*	*
	Aberdeen ℛ	52	33	46·6	41·1	44·0	+ 5·9	18	3	3	0·08	−0·67	10	20
	Braemar ℛ	53	34	48·0	39·7	44·0	+ 9·5	24	6	4	0·22	−0·56	6‡	13‡
	Ochtertyre ℛ	54	28	50·1	38·4	44·5	+ 6·9	33	10	5	0·44	−0·58	*	*
	Leith ℛ	56	36	50·4	43·4	47·0	+ 8·4	35	0	3	0·13	−0·34	*	*
	Marchmont ℛ	53	33	47·6	41·1	44·4	+ 7·0	21	3	1	0·10	−0·70	3	6
2. ENGLAND, N.E.	Alnwick Castle	53	26	47·6	39·1	43·5	+ 4·9	23	8	2	0·05	−0·70	*	*
	Durham	56	34	50·6	39·9	45·5	+ 6·9	33	6	1	0·01	−0·70	15	30
	Shields	57	34	49·3	42·1	45·8	+ 6·0	27	0	1	0·04	−0·57	*	*
	Scarborough ℳ	55	34	49·7	42·2	46·1	+ 7·1	29	0	4	0·17	−0·53	12‡	24‡
	York	59	30	50·3	41·4	46·0	+ 6·9	31	2	2	0·14	−0·41	12	24
	Spurn Head	55	37	49·6	42·9	46·4	+ 7·2	31	0	1	0·24	?	*	*
3. ENGLAND, E.	Hillington ℳ	56	26	49·7	39·2	44·7	+ 5·7	31	8	3	0·48	−0·12	17	31
	Yarmouth	54	30	48·0	41·4	44·8	+ 5·4	22	2	2	0·15	−0·55	*	*
	Geldeston	55	28	49·6	39·9	44·9	+ 5·2	29	6	3	0·16	−0·42	14	25
	Cambridge	59	26	51·4	39·4	45·6	+ 6·4	36	7	1	0·28	−0·17	17	31
	Rothamsted	57	26	50·0	38·7	44·6	+ 5·9	32	9	4	0·25	−0·35	*	*
	Ingatestone	56	30	49·6	39·1	44·6	+ 5·0	30	8	3	0·13	−0·36	13‡	24‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	58	30	50·4	40·9	45·8	+ 5·9	31	3	2	0·19	−0·35	16‡	30‡
	Loughborough	59	26	50·9	41·3	46·3	+ 7·6	33	2	2	0·39	−0·14	*	*
	Cheadle ℳ	55	30	48·8	40·2	44·7	+ 6·3	26	5	3	0·22	−0·52	*	*
	Churchstoke ℳ													
	Hereford ℳ	57	25	51·0	39·8	45·6	+ 6·4	34	6	4	0·41	−0·14	*	*
	Cirencester	58	24	49·9	39·6	45·0	+ 5·8	31	7	5	0·72	+0·04	15	28
	Oxford	58	27	49·6	42·7	46·3	+ 6·4	30	0	1	0·75	+0·25	12	23
5. ENGLAND, S.	London	58	28	50·1	41·6	46·0	+ 5·9	30	1	3	0·17	−0·32	8‡	14‡
	Strathfield Turgiss ℳ	57	24	50·4	40·0	45·4	+ 5·5	32	6	2	0·21	−0·30	*	*
	Dungeness	53	24	49·4	44·1	46·8	+ 4·8	34	0	3	0·19	−0·56	*	*
	Hastings (St. Leonard's)	54	34	50·2	45·2	47·8	+ 5·7	41	0	3	0·37	−0·31	18	33
	Southampton	58	29	52·1	43·6	48·0	+ 8·0	42	0	3	0·24	−0·46	20	37
	Hurst Castle	57	33	52·1	46·4	49·4	+ 7·1	52	0	3	0·37	−0·28	*	*
	Stowell ℳ	58	25	50·7	41·5	46·3	+ 6·2	32	1	5	0·70	?	10‡	18‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	55	35	51·1	43·5	47·5	+ 7·2	39	0	6	1·65†	−0·55	*	*
	Glasgow	54	31	49·7	43·5	46·7	+ 7·3	33	0	4	0·41	−0·54	5	11
	Ardrossan	54	34	49·4	44·7	47·2	+ 8·1	36	0	4	0·41	−0·49	*	*
	Glenlee ℛ	54	27	49·0	38·2	43·8	+ 5·6	29	11	4	0·79	?	*	*
	Douglas (Isle of Man)	54	31	50·6	42·2	46·6	+ 5·4	32	0	4	1·31	+0·27	9	18
7. ENGLAND, N.W.	Newton Reigny (Penrith)	54	26	48·1	40·3	44·4	+ 5·9	24	5	3	0·18	−0·62	11	21
	Barrow-in-Furness	52	34	48·3	44·0	46·3	+ 4·9	30	0	3	0·65	−0·15	*	*
	Stonyhurst	56	28	50·1	40·6	45·5	+ 6·4	30	4	3	0·59	−0·51	12	22
	Blackpool ℳ	58	29	49·8	42·6	46·3	+ 4·7	30	0	2	0·38	−0·40	10	19
	Manchester	56	29	50·4	41·4	46·1	+ 6·1	31	2	4	0·38	−0·47	*	*
	Liverpool Obsy (Bidston)	58	34	50·1	44·0	47·2	+ 6·3	36	0	3	0·10	−0·51	*	*
	Llandudno ℳ	57	36	53·4	45·0	49·4	+ 7·2	52	0	3	0·28	−0·47	13	25
	Holyhead	56	38	51·1	47·4	49·4	+ 5·3	52	0	4	0·59	−0·28	*	*
8. ENGLAND, S.W.	Llandovery	57	25	50·1	37·9	44·2	+ 3·5	33	11	5	1·02	−0·19	*	*
	Pembroke	54	36	51·0	46·9	49·1	+ 5·5	50	0	4	0·45	−0·46	14	26
	Arlington (N. Devon)	55	29	50·7	42·6	46·8	+ 5·6	34	0	4	0·71	−0·70	*	*
	Cullompton ℳ	57	26	51·6	43·1	47·5	+ 5·8	39	0	4	0·50	−0·30	9	17
	Falmouth	56	36	52·8	47·1	50·1	+ 5·5	57	0	4	0·70	−0·51	13	24
	Plymouth	57	34	52·0	45·6	48·9	+ 5·8	48	0	4	0·76	−0·06	15	28
	Prawle Point	55	38	51·7	?45·7	?48·8	+?5·7	?48	0	4	0·66	?	*	*
9. IRELAND, N.	Malin Head	54	36	49·9	44·7	47·3	+ 6·2	37	0	6	0·43	?	*	*
	Londonderry	56	28	50·0	40·5	45·4	+ 4·6	30	4	5	0·58	−0·34	*	*
	Mullaghmore	57	34	53·1	42·3	47·9	+ 5·9	41	0	5	0·96	−0·04	*	*
	Belmullet	54	33	50·7	43·1	47·1	+ 2·9	36	0	6	1·31	?	*	*
	Markree Castle	55	25	49·0	36·6	43·1	+ 1·9	30	15	6	1·07	+0·2	12	23
	Brookeborough	54	24	49·8	35·7	43·0	+ 2·8	33	18	4	0·91	?	*	*
	Armagh	56	22	50·3	38·6	44·7	+ 4·0	33	10	4	0·30	−0·34	17	33
	Donaghadee	53	31	49·1	40·1	44·8	+ 3·2	28	5	5	0·23	−0·42	*	*
	Edgeworthstown	55	24	48·1	35·4	42·0	+ 1·9	17	18	4	0·94	+0·18	*	*
10. IRELAND, S.	Dublin	60	23	51·4	42·3	47·0	+ 5·5	35	0	5	0·45	−0·09	16	31
	Parsonstown	56	26	49·9	33·6	45·0	+ 4·4	31	7	4	0·59	−0·07	14	27
	Kilkenny	55	24	49·0	39·9	44·6	+ 4·2	27	6	5	1·11	+0·43	*	*
	Waterford	54	28	51·0	42·1	46·7	+ 4·1	33	0	5	1·94	+1·03	*	*
	Roche's Point	54	35	51·4	44·0	47·9	+ 4·6	41	0	4	2·45	+1·38	*	*
	Valencia	56	33	53·9	43·4	48·9	+ 3·3	48	0	6	2·78	+1·48	17	31
	Killarney	57	27	52·2	40·3	46·5	+ 2·8	39	5	6	2·24	?	*	*
	Foynes	57	31	51·9	41·8	47·1	+ 5·0	37	1	5	0·65	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	55	45	53·3	47·0	50·3	+ 3·0	58	0	6	0·88	−0·03	*	*
	Jersey	57	41	52·0	46·4	49·3	+ 5·2	51	0	3	0·38	−0·57	16	28

Stations marked ℳ are in connection with the Royal Meteorological Society, and those marked ℛ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 50.] *Second Series.* WEEK ENDING MONDAY, 17TH DECEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 200.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	51	27	47·1	37·9	42·2	3 above.	19	+13	11	−22	1679	−197	848	+131
	1. SCOTLAND, EAST	50	25	43·4	33·6	38·7	2 above.	4	− 3	32	− 8	1932	−403	833	+ 43
	2. ENGLAND, N.E.	45	25	40·3	31·3	35·0	3 below.	0	− 9	42	+ 6	2118	−453	650	− 33
	3. ENGLAND, EAST	48	23	38·3	23·8	33·7	5 below.	0	−10	53	+21	2634	−320	823	+111
	4. MIDLAND COUNTIES	45	23	38·6	23·0	33·5	5 below.	0	−10	60	+22	2509 *	−497	829 *	+ 92
	5. ENGLAND, SOUTH	49	23	41·4	30·9	36·4	4 below.	0	−14	39	+10	2839	−387	670	+138
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	49	25	44·4	37·4	41·0	1 above.	7	− 3	18	−11	2223	−306	558	− 17
	7. ENGLAND, N.W.	48	25	42·6	33·9	38·4	2 below.	2	− 9	30	+ 3	2390	−311	573	+ 41
	8. ENGLAND, S.W.	53	24	45·5	34·8	40·3	2 below.	10	− 6	20	+12	2724	−425	540	+219
	9. IRELAND NORTH	51	26	46·0	36·9	41·6	1 above.	11	− 2	22	− 7	2414	−219	472	− 42
	10. IRELAND, SOUTH	55	23	48·0	37·1	42·8	1 above.	25	+ 6	14	−10	2837	−182	396	+ 28
	— CHANNEL ISLANDS	53	36	48·3	41·5	45·0	0 (average).	23	− 5	1	− 6	3272	−221	248	+132

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 200.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			tOths of in.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	5	4	7 less.	231	+ 8	42·1	−1·7	1	2	1157	− 53	27	− 1
	1. SCOTLAND, EAST	2	1	6 less.	200	+14	23·6	−1·4	7	15	1220	−161	28	− 4
	2. ENGLAND, N.E.	1	less than ½	7 less.	178	− 4	23·0	−2·2	16	31	1113	−142	23	− 3
	3. ENGLAND, EAST	0	less than ½	5 less.	179	− 9	23·9	−1·8	15	28	1251	−278	29	− 7
	4. MIDLAND COUNTIES	1	1	5 less.	168	−12	25·2 *	−3·6	7	12	1158 *	−212	27	− 5
	5. ENGLAND, SOUTH	1	1	5 less.	175	+ 2	27·2	−0·2	12	22	1223	−239	29	− 5
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	3	6	4 less.	190	− 9	44·0	−1·6	4	6	1262	− 53	29	− 2
	7. ENGLAND, N.W.	2	2	6 less.	190	+ 3	30·0	−5·8	4	7	1184	−130	27	− 4
	8. ENGLAND, S.W.	2	3	8 less.	197	− 1	36·6	−6·1	14	25	1437	−148	33	− 4
	9. IRELAND, NORTH	3	5	3 less.	205	−17	35·2	−0·1	8	15	1155	− 97	27	− 2
	10. IRELAND, SOUTH	3	3	6 less.	186	−20	33·9	−1·5	13	25	1365	− 67	32	− 1
	— CHANNEL ISLANDS	2	3	6 less.	216	0	29·9	−3·2	27	47	1688	−182	39	− 5

General Remarks.

Weather has been in a more quiet and settled condition than for some time past. The sky has, however, been very cloudy or overcast generally, and over England and the Channel thick fogs or mists have prevailed.

Temperature has continued above the mean in Scotland and Ireland, but over England it has been below; over eastern, central, and southern England the deficit has ranged from 4° to 5°. The highest of the maxima (which were recorded on rather irregular dates) varied from 45° in "England, N.E." and the "Midland Counties" to 55° in "Ireland, S." Over the inland parts of England the maxima on some occasions were but little above 32°. The lowest of the minima were registered in most places during the earlier days of the period, when they ranged from 23° in many parts of England and in the south of Ireland, to 27° in "Scotland, N." and 36° in the "Channel Islands". During the night of the 12th—13th a thermometer exposed on the grass in London fell to 14°.

Rainfall has been less than the mean in all districts. Over the greater part of England no rain has fallen, but at many stations measureable amounts of water were deposited in the gauge by the wet fogs.

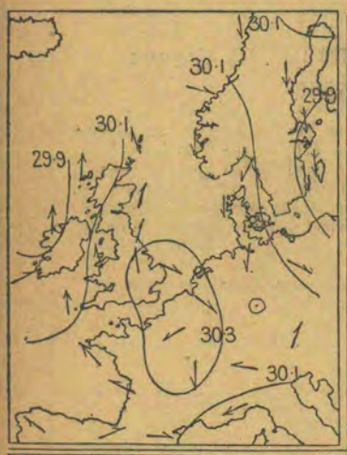
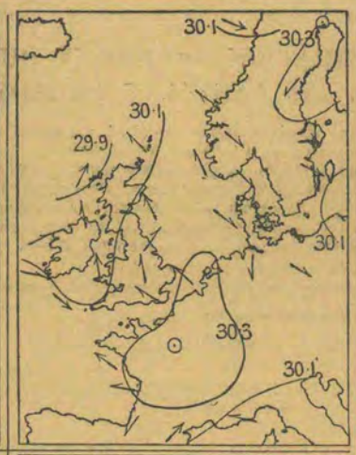
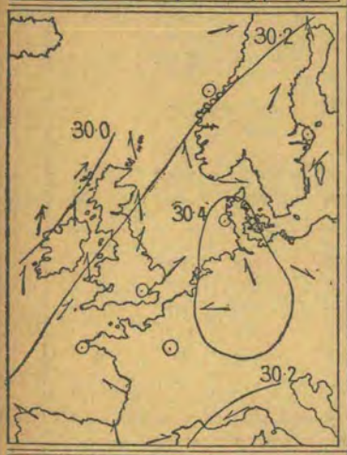
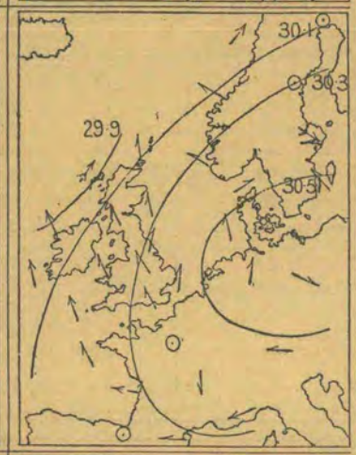
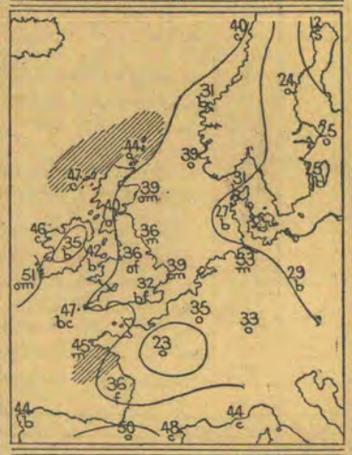
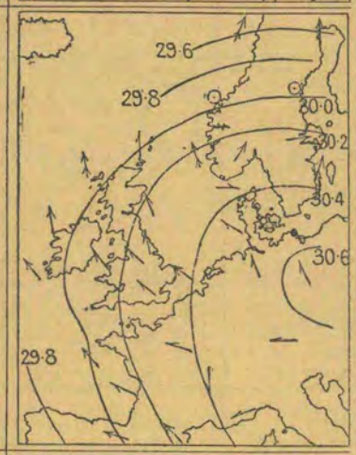
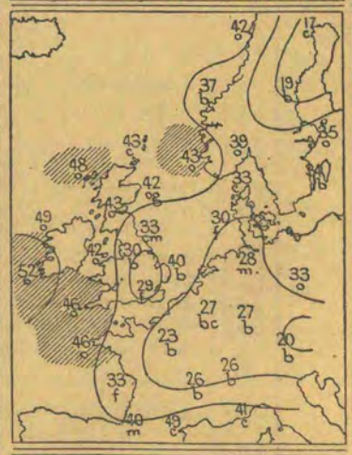
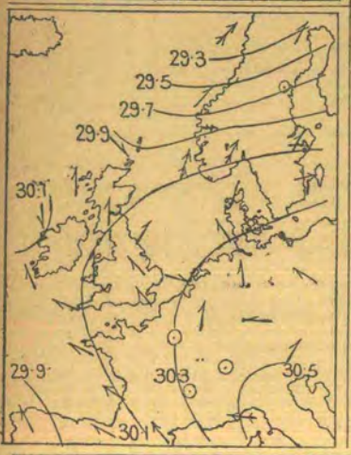
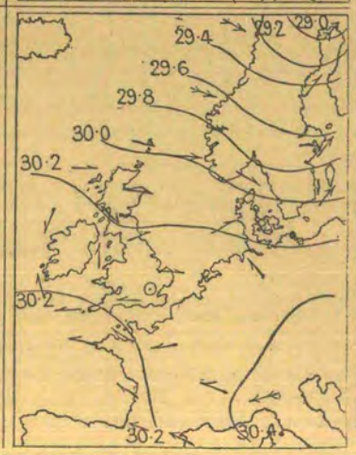
Bright sunshine has been very deficient generally. The percentage of the possible amount of duration ranged from 2 to 15 in Scotland, from 15 to 25 in Ireland, and from 7 to 28 in England.

Depressions observed.—The distribution of pressure over our Islands has been generally anticyclonic, and no depressions have advanced over us. To the westward of Ireland and Scotland, however, some large disturbances moved in a north-easterly direction during the earlier part of the week, and towards the end of the time deep depressions travelled eastwards over the North of Scandinavia.

* This value has been altered in consequence of the receipt of further information.

A 56836. 350.—12/88. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

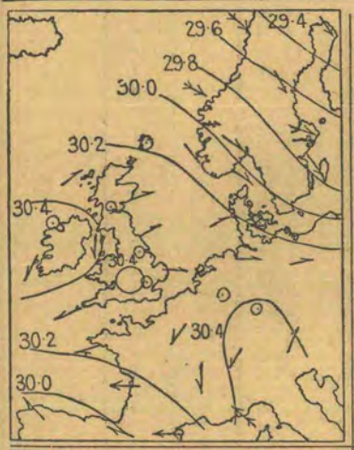
Synoptic Charts. Pressure and Wind. 8 a.m	Synoptic Charts. Pressure and Wind. 6 p.m.	Weather During the 24 hours succeeding 8 a.m. on the dates given.	Synoptic Charts. Temperature and Weather at 8 a.m.
		**Tuesday, December 11.** *Weather* rainy at several of our western and north-western stations, and foggy over central England, but fair or fine elsewhere. Rain falling later in all but our eastern and south-eastern districts. *Temperature* risen in the west and north, but fallen elsewhere. Sharp frost occurring over Great Britain in early morning. Maximum readings below 40° at some of our central stations. *Wind* strong from the Southward on our west and north-west coasts, but moderate from the Northward or North-Westward on the eastern shores of the North Sea, and Easterly or South-Easterly in France and the south of England. *Sea* rough at several of our western and north-western stations, but moderate to smooth elsewhere. *Barometer* falling in our Islands, but rising at most of the Continental stations. Anticyclone lying over central France and the south-east of England, with a depression over the Baltic and another to the westward of our Islands. Latter disturbance subsequently moving northwards, but shallow secondary system appearing over the St. George's Channel.	
		**Wednesday, December 12.** *Weather* fair generally, but foggy at some of the English stations. Slight rain falling later on some parts of our western coasts. *Temperature* changed very irregularly. Sharp frost occurring over Great Britain and the Continent in morning, and maximum readings again below 40° in some parts of eastern and central England. *Wind* chiefly Southerly or South-Easterly; strong in the extreme west and north-west, but light or moderate elsewhere. *Sea* rather rough off the north of Scotland, but moderate to smooth elsewhere. *Barometer* rising at all but our extreme western stations. Central portion of anticyclone now lying over Denmark, the Netherlands, and the north-west of Germany. Large depressions moving northwards along the Irish and Scotch coasts.	
		**Thursday, December 13.** *Weather* fair generally, but foggy at some of the English stations and dull on our extreme western and northern coasts, with rain in places. *Temperature* fallen over England, France, and Germany, but risen several degrees elsewhere. Sharp frost occurring over England and the Continent in early morning. Maximum readings considerably below 40° over our midland and eastern counties. *Wind* Easterly or South-Easterly on our southern and the Franch coasts, but Southerly or South-Westerly in the north; strong in force in the west of our Islands. *Sea* rough on our south-western and extreme northern coasts. *Barometer* falling at all but the Danish and German stations. Central portion of anticyclone now lying over North Germany, and depressions continuing to move northwards along the Irish and Scotch coasts. Large disturbance appearing later over the north of Scandinavia.	
		**Friday, December 14.** *Weather* rainy at some of the Irish stations, and foggy over Central England, but fair or fine elsewhere. Slight rain fell later at several of our western and northern stations. *Temperature* risen in France, the south of our Islands, and the north of Scandinavia, but fallen elsewhere. Frost occurring in early morning over the Continent and our midland and eastern counties. Maximum readings in latter districts again below 40°. *Wind* light or moderate from the South-Eastward on our southern and the French coasts, but variable in the north, and strong to a gale from South-West in Norway. Subsequently shifting to the Northward in the north of Ireland. *Sea* rough on the Norwegian coasts, but moderate to smooth elsewhere. *Barometer* falling at all but our western and northern stations. Highest pressures now reported over Italy and the south-east of France, but new anticyclone appearing off the west of Ireland. Large and deep depression moving eastwards across the north of Scandinavia during day.	

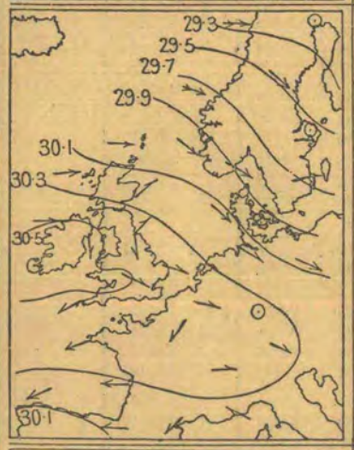
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

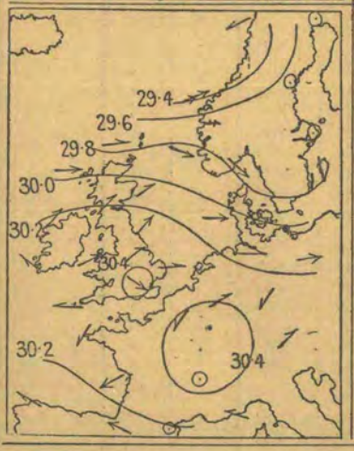
Synoptic Charts.

PRESSURE AND WIND.

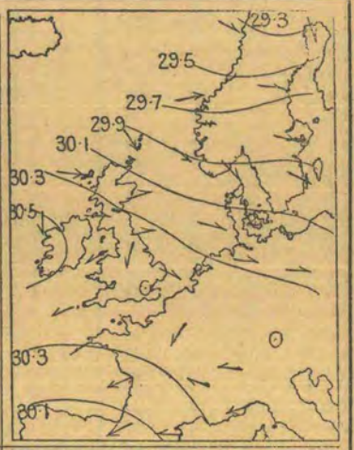
8 a.m.

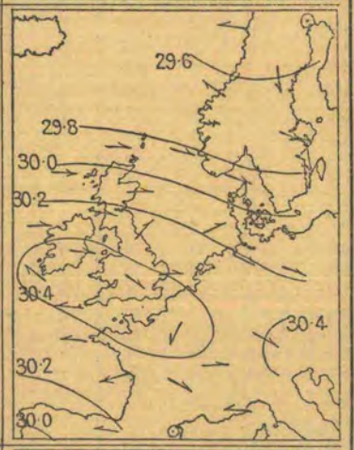


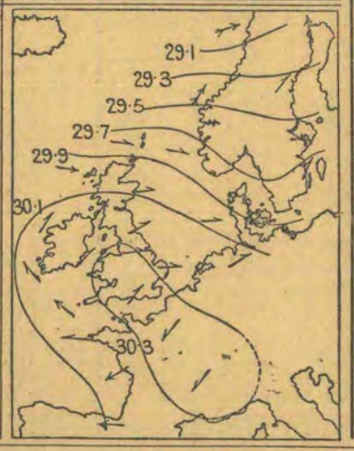




6 p.m.







Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, December 15.

Weather foggy over England, the Netherlands, and Germany, but fair in most other localities. Rain falling later in the extreme north of Scotland.

Temperature fallen somewhat in Norway, the west and north of our Islands, and the south of England, but risen elsewhere. Frost occurring over Great Britain in early morniag. Maximum readings below 40° at some of our eastern and central stations.

Wind strong to a gale from North-West in the north of Scandinavia and light or moderate from the same quarter over Denmark and the North Sea. Moderate North-Easterly in the south of our Islands and Easterly in France.

Sea rough off the west of Norway, but moderate to smooth elsewhere.

Barometer rising at all but the southern French stations. Anticyclonic systems with readings above 30·4 ins. lying respectively over Ireland and western Germany. Depression of previous day travelling away eastwards, but new disturbance appearing later off the north of Scotland.

Sunday, December 16.

Weather dull and unsettled in the north and north-west of our Islands and the west of Norway, and foggy over eastern and central England, but fair or fine elsewhere.

Temperature risen over the Netherlands, Germany, and the north of our Islands, but fallen elsewhere. Frost occurring over England and Ireland in early morning. Maximum readings considerably below 40° over our eastern counties.

Wind North-Easterly or Easterly at our southern and the French stations, but North-Westerly or Westerly elsewhere; strong to a gale on the Norwegian coasts.

Sea rather rough in the far north, but slight or smooth elsewhere.

Barometer falling at all but our southern and the French stations. Pressure now highest over Ireland and Wales. Depressions continuing to advance over Scandinavia from the westward. Fall spreading later to all parts of the United Kingdom.

Monday, December 17.

Weather foggy over France and the south-east of England, and raining in the west of Norway, but fair or fine in most other localities.

Temperature fallen in Sweden and France, but risen elsewhere. Frost occurring over the central parts of England and Ireland in early morning. Maximum readings below 40° over our south-eastern counties.

Wind Westerly or South-Westerly at all our more northern stations, but North-Easterly or Easterly in the south; strong in force in the north of Scotland and west of Norway.

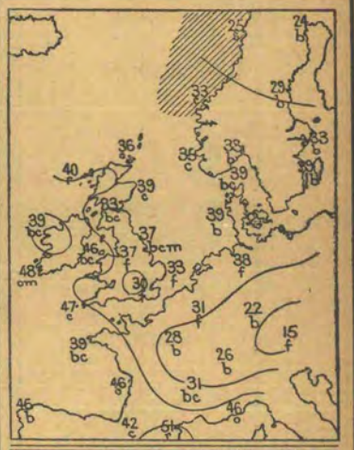
Sea rough in the far north, but slight or smooth elsewhere.

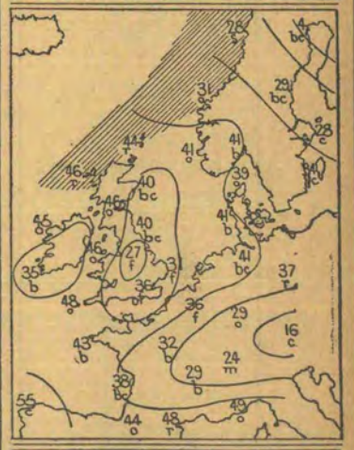
Barometer falling generally. Anticyclone lying over Ireland, England, France, and Western Germany, with a large depression off the west of Norway. Depression subsequently travelling away north-eastwards, and barometer rising again at the Norwegian stations.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

REPORTS received too late for insertion in their proper places.

DATE OF REPORT.	NAMES OF STATIONS.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the Week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
Week ending Dec. 10 - -	Churchstoke - - -	56	25	50·6	37·5	44·3	+ 5·3	55	13	2	0·29	−0·42	15	29

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head ⚓	49	33	46·1	38·6	42·5	+ 2·2	18	10	5	0·44	−0·54	*	*
	Stornoway ⚓	50	33	47·6	40·1	44·0	+ 4·3	22	5	7	0·52	−0·76	1	3
	Wick ⚓	50	35	45·7	37·4	41·7	+ 2·6	10	20	3	0·15	−0·56	*	*
	Lairg ⚓	51	30	44·6	37·0	41·0	+ 3·0	7	21	4	0·10	−0·85	*	*
	Glencarron ⚓	48	29	46·3	37·5	42·1	+ 4·1	20	13	5	1·11†	?	0	0
	Fort Augustus ⚓	48	27	43·5	36·7	41·8	+ 2·7	13	23	3	0·18†	?	*	*
1. SCOTLAND, E.	Nairn ⚓	50	25	46·9	34·9	41·1	+ 3·0	14	30	3	0·06	−0·43	*	*
	Aberdeen ⚓	50	28	44·9	35·6	40·4	+ 2·5	8	25	1	0·01	−0·74	5	12
	Braemar ⚓	45	28	40·9	34·1	37·6	+ 2·9	0	31	0	—	−0·75	8‡	17‡
	Ochtertyre ⚓	50	27	44·3	32·9	38·8	+ 1·1	6	35	2	0·14	−0·90	*	*
	Leith ⚓	46	27	43·6	33·4	38·7	+ 0·6	4	33	2	0·38	−0·07	*	*
	Marchmont ⚓	44	26	39·9	30·4	35·3	− 1·0	0	47	2	0·08	−0·71	8	17
2. ENGLAND, N.E.	Alnwick Castle ⚓	43	28	40·6	32·3	36·6	− 1·5	0	38	0	—	−0·75	*	*
	Durham ⚓	45	25	40·0	29·6	35·0	− 3·2	0	49	1	0·01	−0·71	12	24
	Shields ⚓	45	26	41·3	31·9	36·8	− 2·5	0	36	0	—	−0·61	*	*
	Scarborough ⚓	42	26	38·1	31·6	35·0	− 3·5	0	49	0	0·02§	−0·67	19‡	38‡
	York ⚓	45	26	39·6	28·3	34·2	− 4·7	0	55	1	0·02	−0·53	?	?
	Spurn Head ⚓	44	28	41·9	34·0	38·1	− 0·5	0	27	1	0·02	?	*	*
3. ENGLAND, E.	Hillington ⚓	46	24	37·8	28·4	33·3	− 5·4	0	61	0	0·04§	−0·55	20	39
	Yarmouth ⚓	42	29	38·3	32·1	35·3	− 3·9	0	47	0	0·04§	−0·64	*	*
	Geldeston ⚓	48	29	40·9	30·7	36·0	− 3·4	0	42	0	0·01§	−0·54	17	31
	Cambridge ⚓	44	25	39·4	27·1	33·5	− 5·6	0	60	0	—	−0·45	15	27
	Rothamsted ⚓	38	23	36·4	26·3	31·6	— 6·6	0	73	0	0·03§	−0·55	*	*
	Ingatestone ⚓	40	26	36·9	28·2	32·7	− 6·7	0	65	0	0·02§	−0·43	8‡	16‡
4. MIDLAND COUNTIES	Rawtry (Hesley Hall) ⚓	42	23	38·0	26·9	32·7	− 6·6	0	65	1	0·06	−0·48	11‡	21‡
	Loughborough ⚓	45	23	40·0	27·6	34·1	− 4·1	0	55	2	0·08	−0·45	*	*
	Cheadle ⚓	43	26	38·8	29·8	34·5	− 3·7	0	53	1	0·04	−0·70	*	*
	Churchstoke ⚓	44	23	40·1	29·3	34·9	− 3·8	0	59	0	—	−0·71	7	13
	Hereford ⚓	40	24	38·2	28·0	33·3	− 5·9	0	61	1	0·28	−0·26	*	*
	Cirencester ⚓	42	25	37·7	26·3	32·2	− 6·9	0	69	2	0·03	−0·59	6	10
	Oxford ⚓	40	25	37·7	28·0	33·0	− 6·4	0	63	0	—	−0·49	3	6
5. ENGLAND, S.	London ⚓	42	25	39·0	23·7	34·1	− 5·6	0	55	0	0·01§	−0·47	2‡	3‡
	Strathfield Turgiss ⚓	40	23	36·9	26·5	31·9	− 7·4	0	71	1	0·04	−0·46	*	*
	Dungeness ⚓	48	27	43·0	31·0	37·2	− 4·6	3	41	0	0·02§	−0·71	*	*
	Hastings (St. Leonard's) ⚓	47	32	41·9	34·5	38·4	− 3·2	0	25	0	0·03§	−0·65	22	41
	Southampton ⚓	49	28	43·2	32·1	37·9	− 1·7	3	37	1	0·10	−0·60	15	28
	Hurst Castle ⚓	49	32	44·7	35·3	40·2	− 1·9	8	27	1	0·15	−0·49	*	*
	Stowell ⚓	47	23	41·3	28·2	35·0	− 5·1	0	49	1	0·22	?	8‡	16‡
6. SCOTLAND, W.	Laudale (Loch Sunart) ⚓	49	38	47·2	41·1	44·3	+ 4·0	20	3	5	0·76†	−1·43	*	*
	Glasgow ⚓	46	29	43·0	33·4	39·8	+ 0·6	3	21	3	0·39	−0·56	1	1
	Ardrossan ⚓	46	33	44·9	36·6	40·9	+ 1·8	8	22	1	0·28	−0·62	*	*
	Glenlee ⚓	43	25	40·8	34·8	37·9	− 0·7	0	29	3	0·37	?	*	*
	Douglas (Isle of Man) ⚓	48	33	43·0	38·0	42·2	+ 1·1	18	11	2	0·93	−0·09	6	11
7. ENGLAND, N.W.	Newton Reigny (Penrith) ⚓	44	25	40·8	30·0	35·6	− 2·4	0	45	2	0·05	−0·74	7	14
	Barrow-in-Furness ⚓	45	31	41·9	35·1	38·5	− 2·6	0	25	2	0·12	−0·66	*	*
	Stonyhurst ⚓	42	27	40·4	32·0	36·4	− 2·6	0	39	1	0·10	−1·00	0	0
	Blackpool ⚓	47	29	42·5	32·3	37·6	− 3·7	1	36	1	0·53	−0·25	0	0
	Manchester ⚓	43	30	41·5	32·9	37·4	− 2·3	0	32	2	0·08	−0·78	*	*
	Liverpool Obsy (Bidston) ⚓	46	28	42·3	32·3	37·5	− 3·2	1	36	2	0·18	−0·42	*	*
	Llandudno ⚓	48	32	45·1	35·5	40·5	− 1·7	9	26	2	0·38	−0·37	7	14
	Holyhead ⚓	48	35	46·4	40·9	43·8	− 0·2	17	3	3	0·33	−0·54	*	*
8. ENGLAND, S.W.	Llandovery ⚓	44	24	41·7	28·4	35·3	− 5·3	0	47	4	0·54	−0·69	*	*
	Pembroke ⚓	48	36	46·4	39·1	42·9	− 0·3	18	8	2	0·33	−0·58	5	9
	Arlington (N. Devon) ⚓	49	28	44·7	32·6	38·9	− 1·9	8	37	1	0·29	−1·12	*	*
	Cullompton ⚓	47	25	43·4	30·0	37·0	− 4·3	4	45	1	0·33	−0·48	8	14
	Falmouth ⚓	51	37	47·9	40·7	44·4	0·0	22	4	1	0·31	−0·89	17	30
	Plymouth ⚓	51	32	46·5	34·9	40·9	− 2·2	13	29	1	0·30	−0·52	27	48
	Prawle Point ⚓	53	36	47·6	38·1	43·0	− 0·1	23	11	1	0·10	?	*	*
9. IRELAND, N.	Malin Head ⚓	47	37	46·1	40·7	43·5	+ 2·7	16	4	4	0·26	?	*	*
	Londonderry ⚓	47	34	45·4	37·9	41·8	+ 1·1	10	18	3	0·33	−0·57	*	*
	Mullaghmore ⚓	51	33	48·1	39·6	44·0	+ 2·3	24	7	3	0·28	−0·68	*	*
	Belmullet ⚓	50	38	49·0	42·3	45·8	+ 1·9	27	0	1	0·82	?	*	*
	Markree Castle ⚓	48	27	44·8	33·0	39·1	− 2·0	8	35	5	0·57	−0·22	6	12
	Brookeborough ⚓	48	26	44·6	32·4	38·7	− 1·4	7	37	5	0·58	?	*	*
	Armagh ⚓	47	31	44·9	36·2	40·7	+ 0·3	8	23	2	0·38	−0·26	9	17
	Donaghadee ⚓	48	31	45·4	35·6	40·7	− 0·6	10	26	2	0·65	+0·02	*	*
	Edgeworthstown ⚓	49	30	45·3	34·4	40·1	+ 0·1	9	31	2	0·34	−0·39	*	*
10. IRELAND, S.	Dublin ⚓	50	33	46·2	37·7	42·1	+ 0·8	19	12	2	0·14	−0·51	14	26
	Parsonstown ⚓	?49	25	?45·7	34·0	?40·1	−?0·1	?10	?32	3	0·29	−0·38	12	23
	Kilkenny ⚓	50	23	46·0	31·6	39·1	− 1·0	11	41	3	0·55	−0·15	*	*
	Waterford ⚓	51	26	47·9	36·9	42·6	+ 0·4	23	14	3	0·40	−0·51	*	*
	Roche's Point ⚓	51	34	49·7	42·1	46·1	+ 3·0	29	0	4	0·23	−0·85	*	*
	Valencia ⚓	53	32	50·9	42·6	46·9	+ 1·3	34	0	3	0·18	−1·12	13	25
	Killarney ⚓	55	25	50·8	34·8	43·1	− 0·5	38	20	3	0·11	?	*	*
	Foynes ⚓	54	28	47·1	37·4	42·4	+ 0·3	22	13	2	0·13	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's) ⚓	53	44	50·1	45·0	47·7	+ 0·6	40	0	2	0·35	−0·53	*	*
	Jersey ⚓	50	36	46·4	37·9	42·3	− 1·3	19	11	1	0·25	−0·64	27	47

Stations marked ⚓ are in connection with the Royal Meteorological Society, and those marked § with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

§ Fog or mist.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON; R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 51.] *Second Series.* WEEK ENDING MONDAY, 24TH DECEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861–80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878–85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866–85, but the *Mean numbers of Rainy Days* are those for the eight years 1878–85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881–85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 204.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	54	25	48·0	39·1	43·8	5 above.	25	+19	8	−26	1704	−178	856	+103
	1. SCOTLAND, EAST	54	27	46·3	36·5	41·6	5 above.	12	+ 5	24	−18	1994	−397	857	+ 26
	2. ENGLAND, N.E.	49	23	44·9	36·8	41·0	3 above.	8	+ 1	21	−17	2126	−449	671	− 50
	3. ENGLAND, EAST	56	24	46·6	36·3	41·6	3 above.	13	+ 4	24	−15	2647	−313	847	+ 93
	4. MIDLAND COUNTIES	51	18	47·5	36·9	42·4	4 above.	24	+15	14	−21	2533	−389	843	+ 67
	5. ENGLAND, SOUTH	53	26	49·3	40·6	45·1	5 above.	28	+15	4	−27	2857	−370	674	+111
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	54	31	48·3	39·9	44·3	5 above.	25	+16	6	−25	2248	−289	564	− 44
	7. ENGLAND, N.W.	52	26	48·3	39·7	44·2	4 above.	25	+15	6	−23	2415	−294	579	+ 18
	8. ENGLAND, S.W.	56	28	51·0	41·8	46·6	4 above.	33	+19	1	−17	2757	−498	541	+205
	9. IRELAND NORTH	54	30	47·6	39·1	43·5	2 above.	21	+11	8	−21	2437	−207	480	− 62
	10. IRELAND, SOUTH	55	25	50·2	39·3	45·0	3 above.	32	+12	8	−16	2869	−174	404	+ 13
	— CHANNEL ISLANDS	55	36	51·6	44·5	48·2	3 above.	43	+17	0	− 7	3315	−204	248	+126

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 204.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of In.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	5	5	5 less.	236	+ 8	42·6	−2·3	4	9	1161	− 52	27	− 1
	1. SCOTLAND, EAST	4	7	0 (average).	204	+14	30·3	−1·4	3	7	1223	−165	28	− 4
	2. ENGLAND, N.E.	4	4	3 less.	182	− 4	25·4	−2·4	4	8	1115 *	−147	24	− 3
	3. ENGLAND, EAST	4	5	0 (average).	183	− 8	24·4	−1·8	6	13	1257	−231	29	− 6
	4. MIDLAND COUNTIES	4	5	1 less.	172	−11	25·7	−3·7	4	7	1162	−217	27	− 5
	5. ENGLAND, SOUTH	5	6	0 (average).	189	+ 4	27·8	−0·2	7	12	1235	−242	28	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	5	15	2 less.	195	− 8	45·5	−1·3	2	5	1264	− 61	29	− 1
	7. ENGLAND, N.W.	5	5	4 less.	195	+ 4	33·5	−6·1	2	3	1186	−133	27	− 3
	8. ENGLAND, S.W.	6	14	4 more.	203	+ 1	38·0	−5·8	4	6	1441	−151	33	− 4
	9. IRELAND, NORTH	6	10	2 more.	211	−16	36·2	+0·1	5	11	1169	− 97	27	− 2
	10. IRELAND, SOUTH	7	25	16 more.	193	−17	33·4	+0·1	8	15	1373	− 66	32	− 1
	— CHANNEL ISLANDS	6	7	2 less.	222	+ 1	33·6	−3·4	11	20	1639	−189	39	− 4

General Remarks.

Weather was fair and dry over the greater part of the Kingdom at the commencement of the period. Unsettled rainy conditions had, however, already set in on our extreme western coasts and soon extended to all districts. In Ireland and the south-west of England the falls of rain were heavy.

Temperature has been above the mean; the excess over Scotland and in "England, S." has been as much as 5°, and in most other districts 3° or 4°. The highest of the maxima were generally registered towards the end of the period, when they ranged from 49° in "England, N.E." to 56° in "England, E." The lowest of the minima (which were recorded on the 18th) varied from 18° in the "Midland Counties" to 23° in "England, N.E." and to 31° in "Scotland, W.", while in the "Channel Islands" the lowest reading was 36°. During the greater part of the period the minima were high, generally ranging between 42° and 48°.

Rainfall has been more than the mean in Ireland and in "England, S.W.", but less in most other parts of England and also in Scotland.

Bright sunshine has been very deficient in all districts; the percentage of the possible amount of duration ranged from 3 in "England, N.W." to 15 in "Ireland, S.", and 20 in the "Channel Islands".

Depressions observed.—Soon after the commencement of the period the barometer began to fall steadily over the whole Kingdom and depressions skirted our extreme western coasts, while a shallow secondary system advanced to the Irish Sea. During the evening of the 21st, a small but very deep depression appeared off the south of Ireland, and after moving northwards for a time, it changed its course and travelled south-eastwards, and finally filled up over the west of England during the 23rd. At the end of the period a rather deep depression lay off the north of Scotland. Moderate to fresh Southerly to South-Westerly winds were general over our Islands during the earlier part of the time, but on the 21st fresh or strong Southerly gales were experienced at our western and southern stations, and on the 22nd fresh North-Westerly gales prevailed on our extreme south-western coasts, and fresh Southerly gales in Scotland.

* This value has been altered slightly in consequence of further information.

A 56903. 350.—12/88. Wt. 87. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

Synoptic Charts.

PRESSURE AND WIND.

8 a.m	6 p.m.

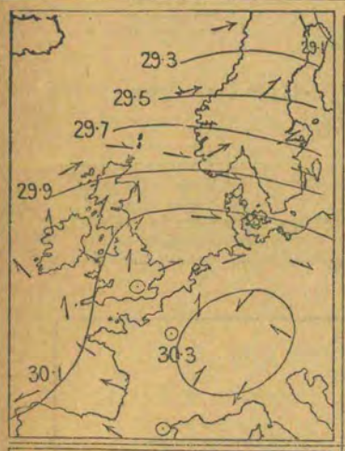
Weather

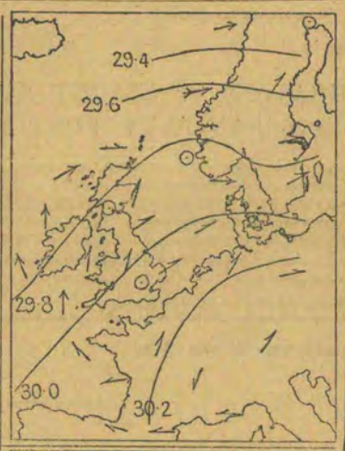
During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.





Tuesday, December 18.

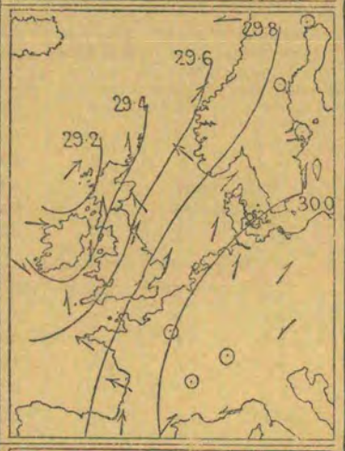
Weather foggy over England, the Netherlands, and many parts of France, but fair or fine elsewhere. Rain falling later at some of our western stations.

Temperature risen considerably in Sweden and the north of Norway and slightly on our south-western and extreme southern coasts, but fallen elsewhere. Sharp frost occurring over England in early morning (minimum 18° at Churchstoke), but thermometer rising fast towards night.

Wind Easterly in France and South-Easterly on our south-west coasts, but South-Westerly or Westerly elsewhere; strong to a gale in force on the Norwegian coasts.

Sea rough in the extreme north, but moderate to smooth elsewhere.

Barometer falling at all but the Danish and German stations. Pressure highest in an anticyclone lying over South Germany and the east of France, and lowest in the north of Scandinavia. Rise taking place in Scandinavia later.



Wednesday, December 19.

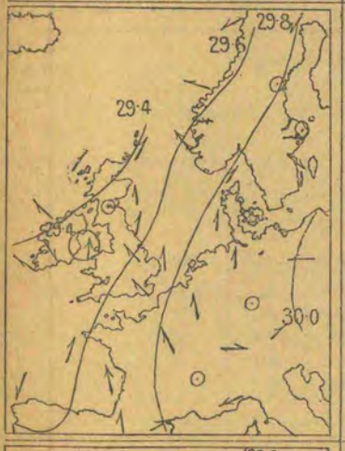
Weather foggy at several of the German, Dutch, and French stations, and showery in the west of our Islands, but fair or fine elsewhere. Heavy rain falling later in some parts of Ireland.

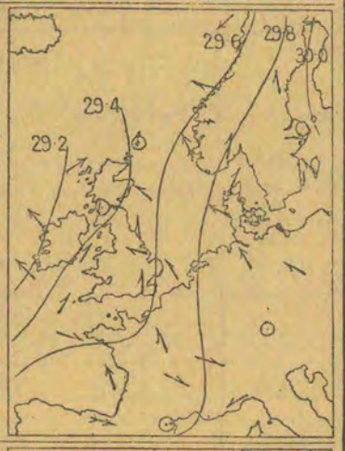
Temperature risen at all but the Danish and German stations—quickly over England. Maximum readings a little above 50° in most places.

Wind chiefly southerly; strong in force on our western coasts, but light or moderate in most other localities. Subsequently increasing to a fresh or strong gale in Ireland.

Sea rough on our south-western and extreme northern coasts.

Barometer falling at all but the Swedish stations. Pressure remaining highest over South Germany and the east of France, with a large and deep depression off the west of Ireland. Depression subsequently moving northwards, and barometer rising in extreme west.





Thursday, December 20.

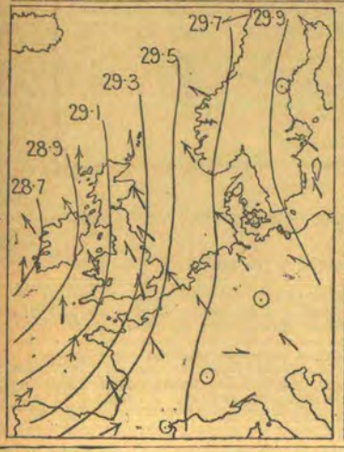
Weather rainy in the west of England, and the east of Scotland, and foggy in Denmark, but fair or fine elsewhere. Rain falling later in nearly all parts of the United Kingdom and France.

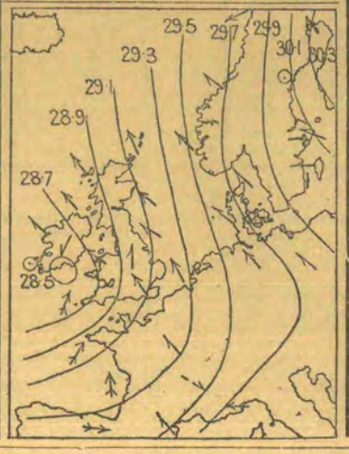
Temperature risen at all but our western stations. Maximum readings a little above 50° in many places.

Wind chiefly Southerly or South-Easterly; strong in force at some of our western stations, but light or moderate elsewhere.

Sea rather rough off the west and south-west of England, and also off the east of Scotland.

Barometer falling at all but our western, northern, and the Swedish stations. Pressure highest over Germany, with a shallow depression off the north-west of Scotland, and a small secondary disturbance over the Irish Sea. Brisk fall taking place in Ireland later.





Friday, December 21.

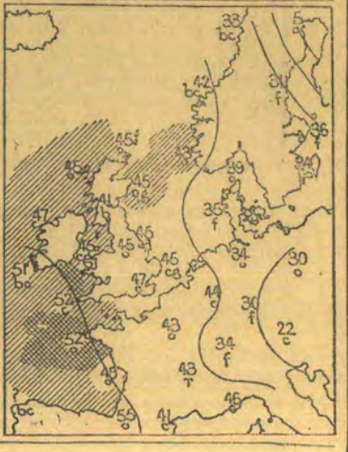
Weather cloudy generally, with rain in many parts of our Islands, and fog at some of the Swedish, Danish, and German, stations. Heavy rain falling later on the west coasts of our Islands and France.

Temperature risen in most places. Maximum readings a little above 50° at nearly all our western and southern stations.

Wind South-Easterly or Southerly; strong to a gale over the Bay of Biscay, and strong on our western coasts, but moderate or fresh elsewhere. Subsequently increasing to a gale in the west and south-west of England.

Sea rough on all but our east coasts, and high in the south-west.

Barometer falling at all but the Swedish stations. Pressure highest over the Baltic, with a large depression off the west of Ireland. Deep secondary disturbance advancing to the south of Ireland later, and barometer falling rapidly in south-west.

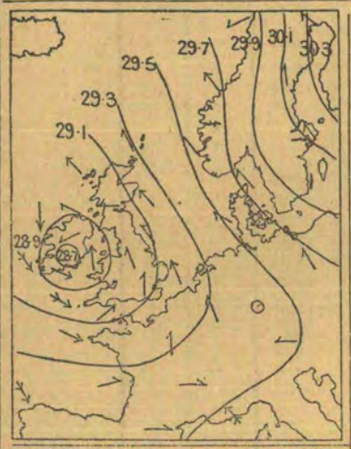


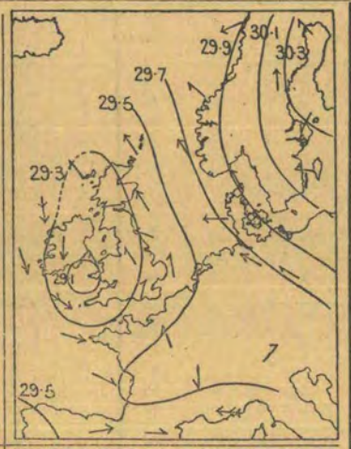
SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

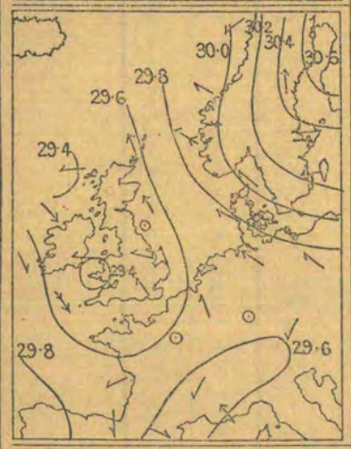
Synoptic Charts.

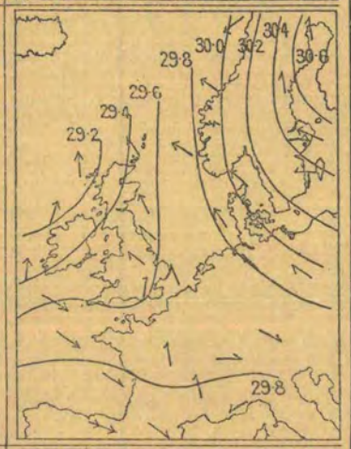
PRESSURE AND WIND.

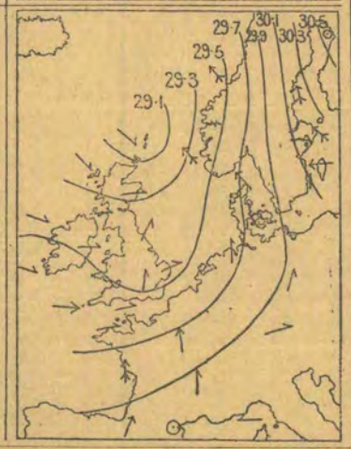
8 a.m. | **6 p.m.**











Weather

During the 24 hours succeeding

8 a.m. on the dates given.

Saturday, December 22.

Weather cloudy generally, with showers in many parts of the United Kingdom, and snow at Haparanda. Thunderstorms and exceedingly heavy rain occurring in the south of France later.

Temperature changed rather irregularly, but risen in most places. Maximum readings a little above 50° over our midland and southern counties.

Wind strong from the South-Eastward over the North Sea and adjacent coasts and from East in the north of Ireland, but Westerly or North-Westerly gales reported in south-west and strong South-Westerly winds in Channel.

Sea high off the north and east of Scotland, and rough on most other parts of our coasts.

Barometer rising generally. Pressure now highest over the Gulf of Bothnia, with deep depression over central Ireland. Depression subsequently becoming less deep, and barometer continuing to rise generally.

Sunday, December 23.

Weather cloudy at all but the Irish and northern Scandinavian stations, with showers in many parts of Great Britain and fog over the Netherlands and east of France. Steady rain setting in later over Ireland.

Temperature fallen generally in morning, but afterwards rising a little above 50° at most of our southern stations.

Wind North-Westerly on our western coasts, but South-Westerly in the south and South-Easterly over the North Sea and its immediate neighbourhood; fresh or strong in force in most places. Subsequently backing to south in Ireland and increasing to a moderate gale.

Sea high off the north and east of Scotland and the south-west of France, and rough at several of our western and southern stations.

Barometer rising generally. Large anticyclone lying over Northern Europe. Depression of previous two days filling up over Wales. New disturbance advancing later to our extreme north-west coasts, and barometer falling quickly in Ireland and Scotland.

Monday, December 24.

Weather cloudy generally, with rain in many parts of Great Britain and France, and fog in Germany. Some improvement taking place in west later.

Temperature risen a little over England, France, and the south of Ireland, but changed irregularly elsewhere. Maximum readings again a little above 50° at our central and southern stations, but sharp frost occurring over Great Britain at night.

Wind Westerly on our western coasts; South-Westerly in the south and Southerly in the east, but South-Easterly in Scandinavia; fresh or strong in force generally, with gales in Norway. Subsequently veering to the Westward in all parts of our Islands, and falling moderate.

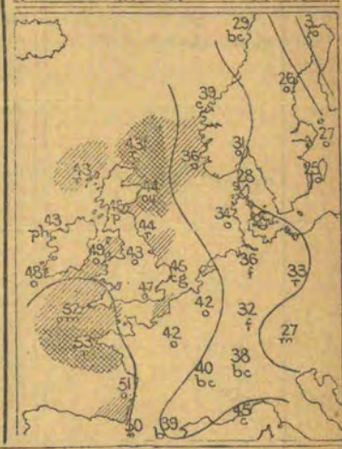
Sea very high off the north and east of Scotland, and rough in most other localities.

Barometer falling at all but the Irish, French, and German stations. Anticyclone still lying over Northern Europe, but depression reported off the north of Scotland. Secondary disturbances subsequently appearing over various parts of Great Britain, but barometer rising generally towards night.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.



Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 201 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches.	Inches.		
0. SCOTLAND, N.	Sumburgh Head	49	40	46·3	43·0	44·8	+ 4·7	20	0	6	0·77	−0·18	*	*
	Stornoway	52	37	48·0	41·7	45·0	+ 5·6	22	1	6	0·75	−0·51	7	16
	Wick	52	39	48·6	41·6	45·2	+ 6·1	24	1	4	0·10	−0·59	*	*
	Lairg ⚓	49	25	45·9	34·7	40·6	+ 2·9	11	30	3	0·07	−0·85	*	*
	Glencarron ⚓	54	28	49·2	36·0	42·9	+ 4·9	32	17	5	0·67†	?	1	2
	Fort Augustus ⚓	53	32	49·9	37·8	44·1	+ 5·1	32	12	6	0·60†	?	*	*
1. SCOTLAND, E.	Nairn	54	36	47·7	38·3	43·2	+ 5·1	24	10	3	0·06	−0·42	*	*
	Aberdeen	49	32	45·4	39·7	42·7	+ 5·1	15	6	5	0·67	−0·05	1	1
	Braemar ⚓	50	30	45·5	35·7	40·8	+ 6·3	10	26	5	1·87	+1·16	3‡	6‡
	Ochtertyre ⚓	51	27	46·9	35·4	41·4	+ 3·8	14	28	5	1·22	+0·15	*	*
	Leith	54	30	48·6	37·7	43·4	+ 5·2	28	12	4	0·12	−0·33	*	*
	Marchmont ⚓	48	28	43·7	32·1	38·1	+ 2·0	5	37	1	0·05	−0·72	6	13
2. ENGLAND, N.E.	Alnwick Castle	46	30	43·1	38·1	40·7	+ 2·6	3	15	5	0·76	+0·05	*	*
	Durham	48	23	45·3	35·5	40·6	+ 2·3	9	26	5	0·29	−0·39	5	10
	Shields	48	28	46·3	37·0	41·8	+ 2·7	12	22	4	0·34	−0·25	*	*
	Scarborough ⚓	47	29	44·2	37·5	41·0	+ 2·8	6	18	3	0·23	−0·41	3‡	5‡
	York	49	23	45·9	35·4	40·9	+ 2·5	11	28	4	0·36	−0·16	?	?
	Spurn Head	47	29	44·7	37 3	41·2	+ 3·0	8	20	5	0·14	?	*	*
3. ENGLAND, E.	Hillington ⚓	56	26	46·6	36·4	41·7	+ 3·5	13	24	3	0·56	−0·01	10	20
	Yarmouth	47	24	44·9	36·3	40·8	+ 1·7	8	23	3	0·42	−0·21	*	*
	Geldeston	49	24	45·9	36·9	41·6	+ 2·4	11	22	4	0·43	−0·07	9	18
	Cambridge	52	24	48·4	34·9	41·9	+ 3·2	18	31	3	0·46	+0·03	3	6
	Rothamsted	50	24	46·0	37·5	41·9	+ 3·7	11	20	5	0·64	+0·05	*	*
	Ingatestone	50	25	47·6	35·5	41·8	+ 2·7	16	28	3	0·55	+0·12	3‡	6‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	49	24	46·4	37·1	41·9	+ 2·7	12	21	3	0·19	−0·34	1‡	1‡
	Loughborough	51	25	48·1	37·9	43·2	+ 3·0	26	11	5	0·15	−0·37	*	*
	Cheadle ⚓	48	21	44·7	36·5	40·8	+ 2·8	8	23	5	0·43	−0·30	*	*
	Churchstoke ⚓	51	18	47·2	35·2	41·4	+ 2·8	15	29	4	0·56	−0·14	5	9
	Hereford ⚓	50	24	49·1	36·3	43·0	+ 4·2	31	16	5	0·63	+0·09	*	*
	Cirencester	50	24	48·4	36·9	42·9	+ 4·0	28	14	4	0·66	−0·03	5	10
	Oxford	51	26	48·6	38·1	43·6	+ 4·4	28	11	5	0·84	+0·34	5	9
5. ENGLAND, S.	London	52	27	49·7	38·7	44·4	+ 5·1	31	9	3	0·38	−0·12	2‡	4‡
	Strathfield Turgiss ⚓	51	26	49·4	37·9	43·9	+ 4·8	31	11	5	0·53	+0·02	*	*
	Dungeness	50	29	49·4	40·7	45·2	+ 3·8	28	4	5	0·44	−0·26	*	*
	Hastings (St. Leonard's)	51	35	45·9	41·4	43·8	+ 2·7	15	2	5	0·54	−0·14	15	28
	Southampton	53	29	50·8	42·7	46·9	+ 7·6	34	0	5	0·90	+0·18	8	15
	Hurst Castle	52	35	50·6	44·3	47·6	+ 6·0	39	0	5	0·50	−0·14	*	*
	Stowell ⚓	50	28	49·0	38·5	44·0	+ 4·0	29	10	5	1·21	?	1‡	2‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	54	34	49·8	40·9	45·5	+ 5·4	29	3	6	2·43†	+0·28	*	*
	Glasgow	52	35	48·2	39·1	43·8	+ 4·8	25	8	5	0·74	−0·24	1	3
	Ardrossan	51	37	47·6	40·4	44·1	+ 5·0	21	4	5	0·58	−0·34	*	*
	Glenlee ⚓	50	31	46·8	36·8	42·0	+ 3·5	13	15	6	2·78	?	*	*
	Douglas (Isle of Man)	52	37	49·0	42·5	45·9	+ 4·8	27	0	5	0·91	−0·12	3	6
7. ENGLAND, N.W.	Newton Reigny (Penrith)													
	Barrow-in-Furness	49	35	47·3	40·6	44·1	+ 3·2	21	4	5	0·54	−0·26	*	*
	Stonyhurst	50	31	47·3	39·1	43·4	+ 4·5	22	8	6	0·43	−0·66	3	6
	Blackpool ⚓	51	32	48·9	39·1	44·2	+ 3·1	28	8	3	0·40	−0·35	0	0
	Manchester	50	31	48·0	39·6	44·0	+ 4·6	24	7	5	0·32	−0·51	*	*
	Liverpool Obsr (Bidston)	50	26	48·0	37·6	43·0	+ 2·4	25	12	6	0·20	−0·40	*	*
	Llandudno ⚓													
	Holyhead	52	35	50·4	42·3	46·5	+ 2·9	32	0	6	0·79	−0·08	*	*
8. ENGLAND, S.W.	Llandovery	55	29	51·0	40·1	45·8	+ 3·3	35	5	7	1·79	+0·56	*	*
	Pembroke	53	36	50·9	43·9	47·5	+ 4·4	39	0	7	1·21	+0·30	3	5
	Arlington (N. Devon)	53	20	49·9	39·4	44·9	+ 4·3	31	7	7	1·95	+0·59	*	*
	Cullompton ⚓	51	28	50·5	38·8	44·9	+ 3·7	34	9	6	1·46	+0·66	2	4
	Falmouth	54	43	51·2	44·9	48·2	+ 4·1	43	0	7	1·64	+0·42	4	6
	Plymouth	55	36	52·5	42·7	47·8	+ 5·0	41	0	5	1·15	+0·30	5	9
	Prawle Point	52	38	51·0	42·7	47·0	+ 4·2	35	0	6	0·89	?	*	*
9. IRELAND, N.	Malin Head	52	35	47·4	39·1	43·4	+ 2·8	22	8	5	0·47	?	*	*
	Londonderry	53	35	47·0	38·9	43·1	+ 2·4	21	9	6	0·42	−0·48	*	*
	Mullaghmore	54	38	49·4	41·1	45·4	+ 3·3	28	3	6	1·23	+0·31	*	*
	Belmullet	52	39	48·9	41·0	45·1	+ 1·1	26	3	7	2·51	?	*	*
	Markree Castle	52	31	46·5	37·8	42·3	+ 1·1	20	12	7	1·45	+0·66	7	14
	Brookeborough	52	30	45·8	35·9	41·1	+ 1·1	11	26	6	0·99	?	*	*
	Armagh	53	33	47·5	38·2	43·0	+ 2·8	23	11	6	0·55	−0·09	3	7
	Donaghadee	52	35	48·4	40·4	44·6	+ 3·4	25	4	6	0·39	−0·25	*	*
	Edgeworthstown												*	*
10. IRELAND, S.	Dublin ⚓	55	31	49·7	39·8	45·0	+ 3·8	30	6	5	1·60	+1·06	8	15
	Parsonstown	?52	25	?49·0	36·0	?42·8	+?2·6	?31	?17	6	1·15	+0·46	11	21
	Kilkenny	53	28	49·4	37·0	43·5	+ 3·6	32	14	7	1·83	+1·11	*	*
	Waterford	53	34	50·4	39·4	45·1	+ 2·9	33	7	7	2·01	+1·09	*	*
	Roche's Point	54	36	50·7	42·6	46·8	+ 3·7	34	0	6	3·55	+2·45	*	*
	Valencia	54	40	51·4	42·1	46·9	+ 1·5	34	0	7	2·85	+1·50	5	19
	Killarney	55	31	50·6	37·5	44·3	+ 0·9	35	13	7	4·52	?	*	*
	Foynes	53	36	50·3	40·3	45·5	+ 3·8	32	5	7	2·26	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	55	46	52·9	43·3	49·7	+ 2·7	54	0	7	0·90	+0·06	*	*
	Jersey	53	36	50·3	42·7	46·7	+ 3·3	33	0	5	0·35	−0·47	11	20

Stations marked ⚓ are in connection with the Royal Meteorological Society, and those marked ⚓ with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

(OFFICIAL COPY.)

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, 116, VICTORIA STREET, LONDON: R. H. SCOTT, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; ADAM AND CHARLES BLACK, 6, NORTH BRIDGE, EDINBURGH; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

VOL. V. No. 52.] *Second Series.* WEEK ENDING MONDAY, 31ST DECEMBER, 1888. [*Price 4d.* [*Annual subscription, post paid, £1 1s. 2d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF BRIGHT SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Summary.—The distribution of the Districts, and the Stations from which reports are received, are shown on the last page of this number. TEMPERATURE.—The *Daily Mean* is obtained from the maxima and minima by applying a suitable correction determined for each month. The *Mean for the Week* is the mean daily temperature (obtained as above) in the corresponding week, derived from 20 years observations (1861-80). ACCUMULATED TEMPERATURE indicates the combined amount and duration of the excess or defect of temperature above or below 42° F. for the period named, and is expressed in Day-degrees—a "Day-degree" signifying 1° continued for 24 hours, or any other number of degrees for an inversely proportional number of hours. The *Means* with which the current values are compared are those for the corresponding period in the eight years, 1878-85. RAINFALL.—*The Mean amounts* are those for the corresponding periods in the twenty years 1866-85, but the *Mean numbers of Rainy Days* are those for the eight years 1878-85, only. BRIGHT SUNSHINE.—*The Mean* values employed are those for the corresponding periods in the five years 1881-85.

A more detailed explanation of the meaning of "Accumulated Temperature" will be found in the Preface to Vol. I. of this Series.

Temperature of the Air.

	DISTRICTS. (See p. 208.)	Observed during the Week. Highest.	Lowest.	Averages of Daily Maxima.	Daily Minima.	Daily Mean.	Above or below the Mean for the Week.	Accumulated. For the Week. Above 42°	Difference from Mean.	Below 42°	Difference from Mean.	From January 3, 1888. Above 42°.	Difference from Mean.	Below 42°.	Difference from Mean.
		°	°	°	°	°	°	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.	Day-deg.
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	45	16	40·1	30·0	35·3	3 below.	0	− 6	47	+12	1704	−186	903	+118
	1. SCOTLAND, EAST	46	16	39·8	28·0	34·1	3 below.	0	− 7	55	+12	1994	−405	912	+ 40
	2. ENGLAND, N.E.	47	24	40·5	31·5	36·2	2 below.	0	− 7	41	+ 2	2126	−457	712	− 43
	3. ENGLAND, EAST	49	21	43·8	31·3	37·8	1 below.	5	− 3	40	− 1	2652	−314	887	+100
	4. MIDLAND COUNTIES	49	21	42·4	30·8	36·6	2 below.	1	− 8	41	− 1	2534	−397	884	+ 73
	5. ENGLAND, SOUTH	52	25	45·2	35·4	40·6	1 above.	9	− 3	27	− 6	2876	−375	701	+112
Principal Grazing, &c. Districts	6. SCOTLAND, WEST	48	18	42·4	31·5	37·2	2 below.	1	− 8	39	+ 6	2249	−300	603	− 29
	7. ENGLAND, N.W.	50	20	41·5	32·9	37·3	3 below.	0	− 9	33	+ 1	2415	−305	612	+ 23
	8. ENGLAND, S.W.	53	19	45·5	34·2	40·1	2 below.	10	− 3	32	+13	2767	−423	573	+223
	9. IRELAND, NORTH	46	20	42·7	32·1	37·6	4 below.	2	−10	37	+ 7	2439	−220	518 *	− 47
	10. IRELAND, SOUTH	52	21	45·3	32·2	39·1	3 below.	9	−10	39	+16	2878	−186	443	+ 33
	— CHANNEL ISLANDS	54	38	49·6	42·5	46·2	1 above.	29	+ 5	0	− 9	3344	−203	248	+122

Rainfall. Bright Sunshine.

	DISTRICTS. (See p. 208.)	Rainfall. For the Week. Number of Rainy Days.	Total Fall.	More or less than the Mean for the Week.	From January 3, 1888. Number of Rainy Days.	Difference from Mean.	Total Fall.	Difference from Mean.	Bright Sunshine. For the Week. Hours recorded.	Percentage of possible Duration.	From January 3, 1888. Hours recorded.	Difference from Mean.	Percentage of possible Duration.	Difference from Mean.
			10ths of in.				Ins.	Ins.						
Principal Wheat-producing Districts.	0. SCOTLAND, NORTH	6	12	3 more.	242	+ 9	43·8	−1·9	4	7	1165	− 51	26	− 1
	1. SCOTLAND, EAST	4	4	4 less.	208	+14	30·7	−1·8	10	21	1233	−165	28	− 4
	2. ENGLAND, N.E.	5	7	1 more.	187	− 3	26·1	−2·3	7	14	1122	−145	25	− 4
	3. ENGLAND, EAST	5	4	1 less.	188	− 7	24·8	−1·9	10	18	1267	−275	29	− 6
	4. MIDLAND COUNTIES	3	13	7 more.	175	−12	27·0	−3·0	11	21	1173	−209	27	− 4
	5. ENGLAND, SOUTH	4	7	1 more.	184	+ 4	28·5	−0·1	10	17	1245	−235	28	− 6
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	5	14	3 less.	200	− 7	46·9	−1·4	13	25	1277	− 53	29	− 1
	7. ENGLAND, N.W.	5	9	1 more.	209	+ 5	31·4	−6·0	10	18	1196	−125	27	− 3
	8. ENGLAND, S.W.	5	11	0 (average).	208	+ 1	39·1	−5·8	18	32	1459	−139	33	− 3
	9. IRELAND, NORTH	6	11	4 more.	217	−14	37·3	+0·4	13	25	1173	− 90	27	− 1
	10. IRELAND, SOUTH	4	10	1 more.	197	−17	40·4	+0·2	14	27	1387	− 61	31	− 2
	— CHANNEL ISLANDS	6	14	5 more.	228	+ 3	32·0	−2·8	11	19	1710	−177	39	− 4

General Remarks.

Weather continued unsettled and rainy during the earlier part of the period, but subsequently became dry and fair—at first in the west and north, and afterwards in the south and east. At the end of the period, however, the conditions had again become rainy on our western and northern coasts. Thick fogs were experienced in some parts of England on the 31st—especially in the Metropolis.

Temperature was generally above the mean during the first part of the period, but towards its close it decreased rapidly, so that the average values for the week have been 4° below the normal in "Ireland, N.", and from 1° to 3° below in all other districts except "England, S." and the "Channel Islands." The highest of the maxima were recorded in most places on the 27th, when they ranged from 45° in "Scotland, N." to 53° in "England, S.W." and 54° in the "Channel Islands". On the 31st, the maximum in London and at Cheadle and Strathfield Turgiss was only 32°, while at Oxford it was as low as 29°. The absolute minima, which were generally registered either on the 30th or 31st, varied from 16° to 18° in Scotland, from 19° to 25° in England, and from 26° to 21° in Ireland. In the "Channel Islands" the lowest reading was 38°.

Rainfall has been rather more than the mean in most districts. In the "Midland Counties" the excess has been considerable.

Bright sunshine has been more prevalent than of late. The percentage of the possible amount of duration has, however, still been rather low, having ranged from 7 in "Scotland, N." to 25 in "Scotland, W." and "Ireland, N.", to 27 in "Ireland, S.", and to 32 in "England, S.W."

Depressions observed.—During the earlier part of the period depressions continued to travel in a north-easterly direction over the western and northern parts of our area, while a few subsidiary disturbances advanced more directly over our Islands. By the 29th, however, the barometer had risen briskly in the west and north, and an anticyclone advanced over our more southern districts from the Atlantic. By the close of the week another depression had appeared in the extreme north-west, and the winds on our western and northern coasts had returned to the Southward and increased in force.

* This value has been altered slightly owing to the receipt of further information.

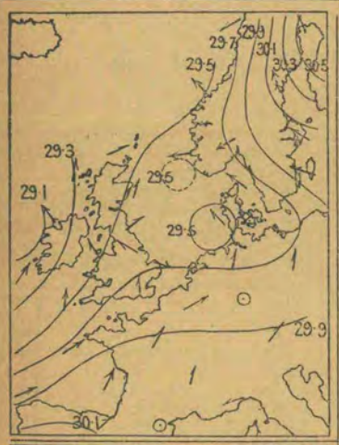
A 56981. 350.—1/89. Wt. 37. E. & S.

II.—SUMMARY OF WEATHER OVER WESTERN EUROPE.

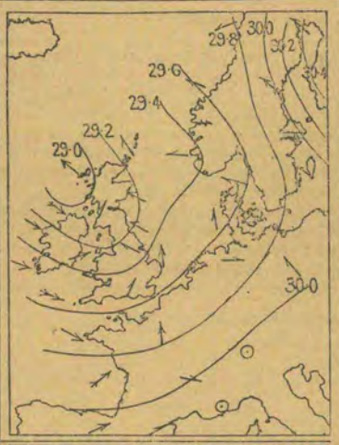
Synoptic Charts.

PRESSURE AND WIND.

8 a.m



6 p.m.



Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Tuesday, December 25.

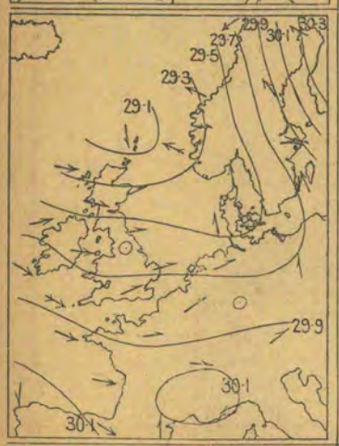
Weather fine over the eastern and central parts of Great Britain, but cloudy elsewhere, with rain on our extreme west and south-west coasts as well as in Denmark and North Germany. Rain falling later in all parts of the United Kingdom.

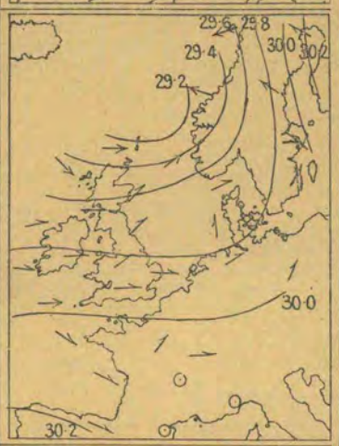
Temperature fallen several degrees in our Islands, but risen at most of the Continental stations. Slight frost occurring in many places in early morning, but thermometer afterwards rising to a little above 50° in the extreme south of England.

Wind strong from the Southward on our western coasts, with gales in Ireland, but light from the South-Westward in the east. Strong South-Easterly winds or gales reported in Sweden. Fresh Southerly gales experienced later in many parts of the United Kingdom.

Sea rough in the extreme west and south-west, and rather rough in the north.

Barometer rising in France and the eastern parts of Great Britain, but falling elsewhere. Pressure highest over Northern Europe, but also high in Spain, with a depression off the west of Ireland and another off the south-west of Denmark. Western disturbance subsequently moving northwards to the neighbourhood of the Hebrides.





Wednesday, December 26.

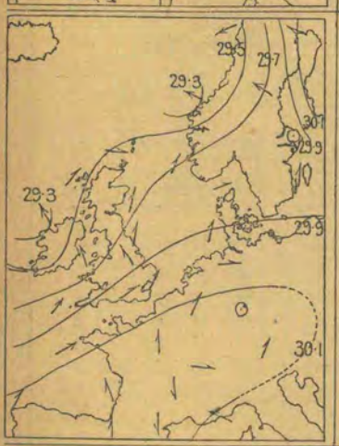
Weather fair in most parts of the United Kingdom, but dull on the Continent, with rain in many places and snow at Hernösand. Showers falling later in our Islands.

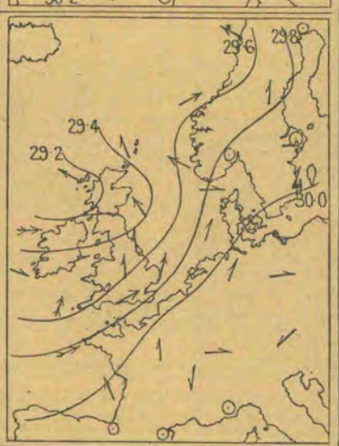
Temperature fallen in the west of our Islands, but risen elsewhere. Maximum readings below 40° in the north of Scotland and below 45° in most parts of England.

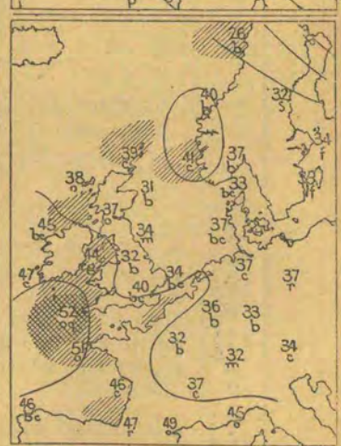
Wind moderate to fresh from the Westward in our Islands and France, but strong to a gale from the South-Eastward in Scandinavia.

Sea rather rough on the more exposed parts of all but our eastern coasts.

Barometer rising at all but the Scandinavian and Danish stations. Pressure high both over Spain and Northern Europe, with a depression off the north of Scotland. Rise continuing all day.







Thursday, December 27.

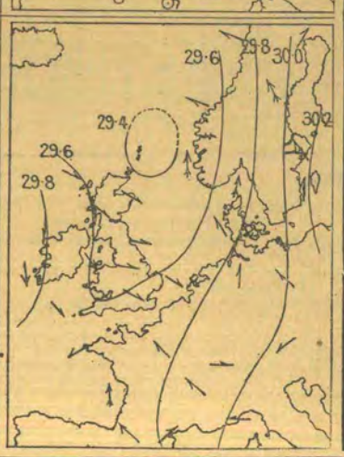
Weather dull and rainy at many of our western stations and also in the south of France, but fine in most other localities. Rain extending later to all parts of the United Kingdom.

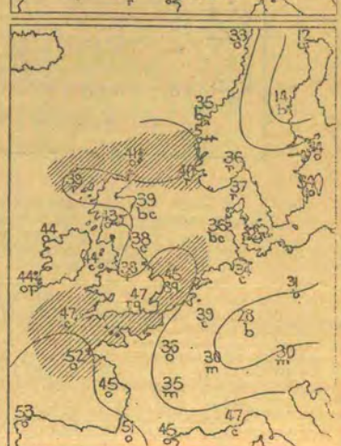
Temperature risen in the west of our Islands, and also in Scandinavia, but fallen elsewhere. Frost occurring over Great Britain in early morning, but thermometer afterwards rising to between 45° and 50° in most parts of England.

Wind strong from the Southward on our western coasts, but moderate from the South-West over the east of our Islands and the eastern shores of the North Sea. Subsequently increasing to fresh gale from South-West over the Channel and from South in the north of Scotland.

Sea high at Scilly and rough on all but our eastern coasts.

Barometer falling in the west of our Islands, but rising elsewhere. Pressure high over Northern Europe and also over France and Spain, but depressions lying respectively off the west of Norway and the north-west of Ireland. Small secondary disturbances advancing eastwards over our Islands during day, and barometer falling generally.





Friday, December 28.

Weather dull and rainy over Central and South-Eastern England, and also in the south of Norway, but fair in most other localities. Showers falling later at some of our western and northern stations.

Temperature risen several degrees over the eastern parts of Great Britain, but fallen elsewhere. Maximum readings above 45° at most of the English stations.

Wind moderate from the North-Westward or Northward on our western and northern coasts, but strong to a gale from the Southward in many other localities. North-Westerly breezes subsequently extending to our eastern and southern stations.

Sea rough or rather so on nearly all coasts.

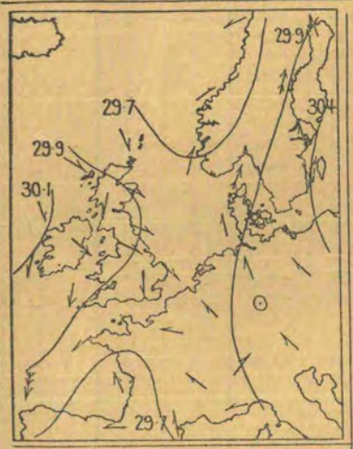
Barometer falling at all but our western and the Swedish stations. Pressure highest over the Baltic and Central Europe, with a depression off the north of Scotland, and secondary disturbances over various parts of Great Britain. Depressions subsequently moving eastwards, and barometer rising over the whole of the United Kingdom.

SUMMARY OF WEATHER OVER WESTERN EUROPE—*continued.*

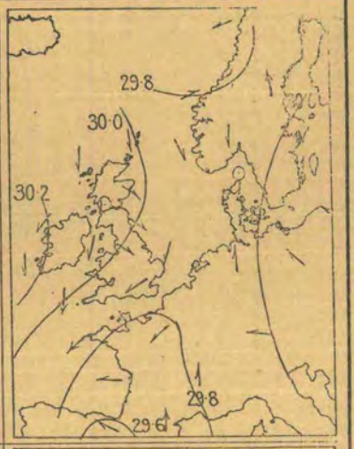
Synoptic Charts.

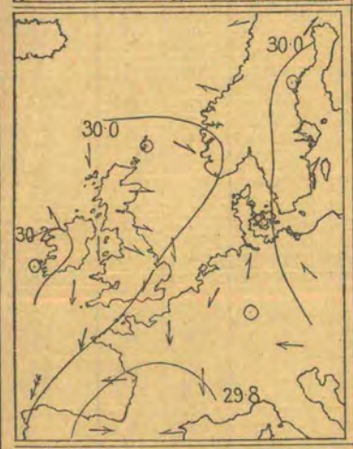
PRESSURE AND WIND.

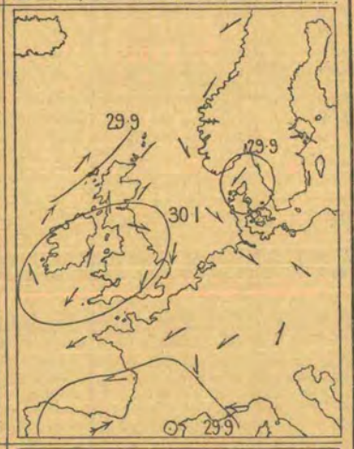
8 a.m.



6 p.m.







Weather

During the 24 hours succeeding 8 a.m. on the dates given.

Saturday, December 29.

Weather fine at most of our western and northern stations, but dull and unsettled elsewhere, with fog in the south-east of England, and rain in many parts of the Continent.

Temperature fallen in our Islands but risen at most of the Continental stations. Frost occurring in early morning in many parts of the United Kingdom, and thermometer remaining below 40° all day at many of the northern and central stations.

Wind moderate or fresh from the Northward in our Islands, but Southerly at most of the Continental stations.

Sea rather rough at the mouth of the Channel and also in the extreme north, but moderate or slight elsewhere.

Barometer rising at all but the Swedish, German, and French stations. Pressure high over the Baltic and also off the west of Ireland, with a depression off the west of Norway and another over the north-east of Spain.

Sunday, December 30.

Weather fine in our Islands as well as in Norway and Germany, but dull elsewhere, with rain over the Netherlands, the south of Sweden, and the north of Spain. Rain falling later on our extreme north-west coasts.

Temperature fallen generally. Sharp frost occurring over the United Kingdom in early morning, and thermometer in many places remaining below 40° all day.

Wind light from the Westward on our northern coasts, but moderate to strong from North-East at our southern and the French stations. Freshening South-Westerly breezes setting in later on the west coasts of Ireland and Scotland.

Sea rather rough in the Straits of Dover, as well as over the Bay of Biscay, but moderate to smooth elsewhere.

Barometer rising at all but our extreme north-western stations. Pressure now highest over Ireland, but still high over the Baltic, with a large shallow depression over the south of France. Decided fall taking place later over Ireland and Scotland.

Monday, December 31.

Weather foggy over England, and cloudy in most other countries, with rain at several of the Irish and Scotch stations, and snow in Sweden. Showers falling later in the west of England.

Temperature risen quickly in the west and north, but fallen elsewhere. Hard frost occurring over Central England in morning, and thermometer in some places remaining below 32° all day.

Wind strong from the South-Westward on our extreme west and north-west coasts, but calm over Central England, and moderate to strong from the Eastward over Scandinavia and France. Subsequently veering to North-West on our western coasts, and falling moderate.

Sea rough off the west coasts of Ireland and Scotland, but moderate to smooth elsewhere.

Barometer falling briskly in the west and north of our Islands, and slightly in Scandinavia, but rising elsewhere. Anticyclone lying over England and the Netherlands, with a large depression off our north-west coasts, and a smaller system over the south of Sweden. Rise taking place in west later.

Synoptic Charts.

TEMPERATURE AND WEATHER

at 8 a.m.

Explanation of Charts.—In the two left-hand Charts the height of the barometer is expressed by isobars, the pressure corresponding to each line being given in inches and tenths. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by isotherms, and the readings at selected stations are given in degrees Fahrenheit. Diagonal lines = rough sea, the shading being proportional to the disturbance.

III.—DATA from which the SUMMARY on page 205 has been calculated.

Districts.	Names of Stations.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Averages for the week. Of Highest each day.	Of Lowest each day.	For whole of the day.	Difference of Daily Average from Mean for the Week.	Accumulated Heat for the Week (in Day-degrees). Above 42° F.	Below 42° F.	Rainfall. Number of Rainy Days.	Rainfall in the Week.	Difference from the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Percentage of possible duration.
		°	°	°	°	°	°	°	°		Inches	Inches.		
0. SCOTLAND, N.	Sumburgh Head	45	31	41·7	33·4	37·7	− 2·3	0	30	6	1·20	+0·28	*	*
	Stornoway	45	30	41·1	32·0	36·7	− 2·5	0	37	7	1·68	+0·45	5	11
	Wick	43	23	42·1	30·7	36·6	− 1·6	0	41	7	1·27	+0·67	*	*
	Lairg 𝔖	41	16	36·9	26·6	32·0	− 5·4	0	70	5	0·76	−0·13	*	*
	Glencarron 𝔖	43	19	38·8	28·2	33·7	− 3·8	0	58	7	1·57†	?		
	Fort Augustus 𝔖	42	22	39·9	29·3	34·8	− 3·8	0	50	6	0·74†	?	*	*
1. SCOTLAND, E.	Nairn	43	26	40·0	28·9	34·7	− 3·2	0	51	3	0·24	−0·34	*	*
	Aberdeen	43	26	39·7	29·7	34·9	− 2·5	0	50	5	0·43	−0·25	14	31
	Braemar 𝔖	39	16	35·9	25·8	31·1	− 3·2	0	76	6	0·23	−0·47	9‡	20‡
	Ochtertyre 𝔖	46	20	41·9	26·9	34·7	− 2·6	0	51	2	0·52	−0·58	*	*
	Leith	44	22	42·0	29·3	35·9	− 2·0	0	43	3	0·08	−0·37	*	*
	Marchmont 𝔖	45	24	39·1	27·1	33·3	− 2·5	0	61	4	0·65	−0·07	6	11
2. ENGLAND, N.E.	Alnwick Castle	45	27	39·0	30·3	34·8	− 3·3	0	50	5	0·81	+0·14	*	*
	Durham	41	24	39·1	28·9	34·2	− 3·7	0	55	5	0·38	−0·24	11	23
	Shields	42	27	40·1	31·0	35·7	− 3·3	0	44	4	0·29	−0·23	*	*
	Scarborough 𝔐	45	29	40·9	32·9	37·1	− 0·9	0	34	5	0·90	+0·34	5‡	10‡
	York	45	26	40·9	30·7	36·0	− 2·2	0	42	5	1·11	+0·61	4	8
	Spurn Head	47	33	42·9	35·3	39·3	+ 0·9	3	25	6	0·53	?	*	*
3. ENGLAND, E.	Hillington 𝔐	48	23	43·5	29·4	36·7	− 1·0	4	47	6	0·28	−0·24	11	21
	Yarmouth	46	30	43·4	33·1	38·5	− 0·2	4	34	4	0·30	−0·29	*	*
	Geldeston	48	26	45·4	32·6	39·3	+ 0·5	10	37	4	0·45	−0·01	8	16
	Cambridge	49	21	44·0	30·6	37·6	− 0·6	6	43	3	0·20	−0·20	9	17
	Rothamsted	48	24	42·7	30·8	37·0	− 0·9	2	41	5	0·60	0·00	*	*
	Ingatestone	48	28	44·0	?31·3	?37·9	−?0·8	6	?41	5	0·46	+0·05	10‡	18‡
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	46	24	40·9	30·3	35·8	− 3·3	0	43	3	1·29	+0·79	11‡	21‡
	Loughborough	49	21	43·6	30·6	37·1	− 0·7	3	43	3	1·15	+0·64	*	*
	Cheadle 𝔐	46	26	40·5	30·3	35·6	− 1·9	0	45	4	1·53	+0·83	*	*
	Churchstoke 𝔐	47	21	42·2	27·5	35·1	− 3·1	1	53	3	1·72	+1·03	18	34
	Hereford 𝔐	49	23	42·7	30·6	36·9	− 1·8	2	42	4	1·37	+0·80	*	*
	Cirencester	49	29	44·9	33·6	39·5	+ 0·8	8	33	3	1·44	+0·73	8	16
	Oxford	49	25	42·3	32·7	37·7	− 1·5	1	34	3	0·46	−0·04	6	12
5. ENGLAND, S.	London	50	28	44·0	34·4	39·4	+ 0·1	6	29	5	0·45	−0·05	3‡	5‡
	Strathfield Turgiss 𝔐	50	25	43·7	31·1	37·7	− 1·3	5	41	4	0·80	+0·27	*	*
	Dungeness	50	34	46·6	38·9	42·9	+ 1·9	19	9	4	1·24	+0·55	*	*
	Hastings (St. Leonard's)	52	34	46·4	38·1	42·4	+ 1·7	19	11	6	1·41	+0·73	18	33
	Southampton	51	30	46·0	33·6	40·1	+ 0·9	11	34	4	0·73	−0·01	9	16
	Hurst Castle	51	32	46·9	37·9	42·6	+ 1·4	21	11	4	0·64	−0·02	*	*
	Stowell 𝔐	50	29	43·1	33·9	38·8	− 1·2	3	31	4	0·76	?	8‡	15‡
6. SCOTLAND, W.	Laudale (Loch Sunart)	46	27	?42·5	32·4	37·7	− 2·2	1	36	7	3·66†	+1·57	*	*
	Glasgow	42	24	39·7	31·6	35·8	− 2·9	0	43	5	0·69	−0·30	9	18
	Ardrossan	45	27	43·9	32·9	38·6	− 0·5	5	35	4	0·31	−0·64	*	*
	Glenlee 𝔖	44	18	40·8	27·9	34·6	− 3·7	0	52	3	1·39	?	*	*
	Douglas (Isle of Man)	48	26	44·9	32·8	39·1	− 1·7	8	36	6	1·17	+0·12	16	31
7. ENGLAND, N.W.	Newton Reigny (Penrith)	42	20	38·6	28·0	33·5	− 4·0	0	60	3	0·59	−0·22	7	13
	Barrow-in-Furness	46	29	40·9	34·4	37·8	− 2·8	0	29	5	0·65	−0·17	*	*
	Stonyhurst	44	26	40·5	31·0	35·9	− 2·8	0	43	5	1·07	+0·04	12	23
	Blackpool 𝔐													
	Manchester	46	26	40·5	31·0	35·9	− 3·3	0	43	5	1·45	+0·64	*	*
	Liverpool Obsr (Bidston)	46	29	42·0	33·7	38·0	− 2·4	0	28	5	0·83	+0·25	*	*
	Llandudno 𝔐													
	Holyhead	50	33	46·3	39·3	42·9	− 0·3	18	8	5	0·86	+0·02	*	*
8. ENGLAND, S.W.	Llandovery	50	19	42·6	26·4	34·8	− 5·5	2	57	4	2·16	+0·92	*	*
	Pembroke	51	34	47·3	39·9	43·8	+ 0·8	21	6	6	1·52	+0·61	18	34
	Arlington (N. Devon)	49	24	43·9	32·1	38·1	− 2·3	5	37	5	1·38	+0·17	*	*
	Cullompton 𝔐	50	28	44·4	31·7	38·3	− 2·8	7	39	4	0·90	+0·10	10	19
	Falmouth	53	31	46·9	37·0	42·2	− 1·9	22	14	5	0·67	−0·58	24	42
	Plymouth	53	29	46·8	35·7	41·5	− 1·1	13	27	4	0·74	−0·14	18	32
	Prawle Point	52	31	46·9	36·6	42·0	− 0·6	14	15	4	0·24	?	*	*
9. IRELAND, N.	Malin Head	45	34	42·7	35·7	39·3	− 1·1	2	23	7	1·13	?	*	*
	Londonderry	44	28	41·5	32·5	37·2	− 3·6	0	34	7	1·27	+0·37	*	*
	Mullaghmore	46	32	45·0	35·1	40·3	− 1·8	8	28	7	1·60	+0·70	*	*
	Belmullet	46	33	45·9	36·9	41·6	− 2·5	11	22	7	1·59	?	*	*
	Markree Castle	45	23	42·1	29·7	36·2	− 5·3	0	45	7	1·16	+0·37	14	27
	Brookeborough	43	20	40·0	27·9	34·3	− 5·8	0	54	4	1·10	?	*	*
	Armagh	45	25	42·4	30·4	36·6	− 3·6	1	42	3	0·61	−0·04	12	23
	Donaghadee	45	30	43·1	32·3	37·9	− 3·0	3	36	6	0·83	+0·17	*	*
	Edgeworthstown	45	21	41·3	28·6	35·2	− 4·5	0	48	4	0·94	+0·25	*	*
10. IRELAND, S.	Dublin	49	26	42·7	32·8	38·0	− 3·1	2	34	3	0·50	−0·03	15	30
	Parsonstown	46	22	43·1	29·1	36·4	− 3·6	3	48	4	0·78	+0·09	12	23
	Kilkenny	47	21	43·0	28·3	36·0	− 3·9	3	51	4	0·80	+0·05	*	*
	Waterford	50	25	45·9	30·0	38·3	− 3·7	11	47	3	0·74	−0·36	*	*
	Roche's Point	51	32	48·3	36·1	42·4	− 0·7	28	17	3	1·20	+0·05	*	*
	Valencia	52	30	49·0	35·9	42·7	− 2·6	31	17	7	1·98	+0·53	15	28
	Killarney	49	24	44·8	31·3	38·8	− 5·0	8	41	5	1·68	?	*	*
	Foynes	49	29	45·7	34·4	40·3	− 1·4	10	31	5	0·66	?	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	53	38	49·7	42·7	46·3	− 0·4	30	0	5	1·18	+0·27	*	*
	Jersey	54	39	49·4	42·3	46·0	+ 2·9	28	0	6	1·53	+0·78	11	19

Stations marked 𝔐 are in connection with the Royal Meteorological Society, and those marked 𝔖 with the Scottish Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The rainfall at Glencarron, Fort Augustus, and Laudale being so much greater than that at our other stations in "Scotland, N." and "Scotland, W.", and there being no averages available for the first and second of these stations, the weekly amounts are not used in calculating the "Difference from the mean for the Week" in those districts.

‡ The Bright Sunshine values entered to Bawtry are recorded at Worksop and those entered to Scarborough at Oswaldkirk. At Braemar, Ingatestone, and Stowell the Bright Sunshine values are obtained by Jordan's Photographic Recorder. At all other stations Stokes' or somewhat similar Bright Sunshine Recorders are in use. For London the Sunshine values are the means of observations made in the City (Bunhill Row), at the Kew Observatory, and the Meteorological Office, Victoria Street.

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QUARTERLY SUMMARY OF THE WEEKLY WEATHER REPORT, 1888.

VOL. V. APPENDIX I.] *New Series.*

FIRST QUARTER—JANUARY TO MARCH.

[*Price 4d.*

TABLE I.—SUMMARY OF RAINFALL AND MEAN TEMPERATURE, FOR THE FIRST QUARTER OF THE TWENTY-THREE YEARS, 1866 TO 1888.

RAINFALL (in Inches).

YEARS.	0. Scotland, N.		Principal Wheat-producing Districts.										Principal Grazing, &c. Districts.										Channel Islands.		Means for the British Islands generally.	
			1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat-producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for the &c. Grazing, Districts.			
	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
1866	—	14·8	—	11·3	—	5·8	—	7·4	—	7·1	—	11·4	—	8·6	—	15·4	—	13·4	—	16·9	—	13·7	—	12·0	—	14·3	—	—	—	11·5
1867	—	10·7	—	9·5	—	5·4	—	5·7	—	8·1	—	8·8	—	7·5	—	9·9	—	11·1	—	15·2	—	11·8	—	10·7	—	11·7	—	—	—	9·6
1868	—	19·1	—	11·7	—	4·9	—	5·4	—	6·7	—	7·5	—	7·2	—	17·6	—	13·3	—	11·9	—	13·0	—	10·5	—	13·3	—	—	—	10·3
1869	—	11·8	—	8·9	—	6·2	—	6·2	—	7·7	—	9·0	—	7·6	—	11·4	—	12·2	—	14·0	—	12·1	—	12·1	—	12·4	—	—	—	10·0
1870	—	6·4	—	6·7	—	4·8	—	3·9	—	5·1	—	6·0	—	5·3	—	8·8	—	9·0	—	10·7	—	8·6	—	9·7	—	9·4	—	—	—	7·4
1871	—	9·4	—	6·9	—	3·8	—	3·9	—	4·8	—	6·1	—	5·1	—	11·7	—	8·7	—	10·0	—	10·7	—	9·4	—	10·1	—	—	—	7·6
1872	—	8·2	—	11·2	—	7·8	—	6·1	—	9·8	—	10·1	—	9·0	—	15·2	—	14·0	—	19·5	—	12·7	—	13·1	—	14·9	—	—	—	12·0
1873	—	7·9	—	7·2	—	5·3	—	5·4	—	7·1	—	8·4	—	6·7	—	10·0	—	9·6	—	14·1	—	8·8	—	11·9	—	10·9	—	—	—	8·8
1874	—	11·5	—	6·5	—	3·5	—	3·1	—	5·7	—	4·4	—	4·6	—	8·6	—	11·0	—	12·5	—	8·4	—	7·7	—	9·6	—	—	—	7·1
1875	—	8·4	—	7·0	—	3·9	—	3·7	—	5·8	—	6·7	—	5·4	—	9·8	—	8·7	—	12·6	—	7·1	—	10·2	—	9·7	—	—	—	7·6
Means for 10 years, 1866-75	—	10·8	—	8·7	—	5·1	—	5·1	—	6·8	—	7·8	—	6·7	—	11·8	—	11·1	—	13·7	—	10·7	—	10·7	—	11·6	—	—	—	9·2
1876	—	13·4	—	9·5	—	6·3	—	6·7	—	8·2	—	7·5	—	7·6	—	12·1	—	12·0	—	10·9	—	10·0	—	10·0	—	11·0	—	—	—	9·3
1877	—	11·9	—	9·8	—	7·1	—	7·6	—	8·3	—	10·7	—	8·7	—	14·2	—	15·4	—	14·2	—	13·4	—	11·4	—	13·7	—	—	—	11·2
1878	67	9·3	40	4·3	45	4·8	52	4·5	43	3·9	42	5·1	44	4·5	53	11·0	51	7·2	41	6·1	60	8·3	52	7·8	51	8·1	56	6·1	48	6·3
1879	54	5·5	46	6·9	55	5·1	54	6·2	48	6·1	49	8·2	50	6·5	47	8·5	43	6·7	54	11·2	60	6·7	55	11·2	52	8·9	63	11·7	51	7·7
1880	49	7·4	41	5·5	34	3·3	38	3·4	35	4·3	38	4·7	37	4·2	49	10·3	40	6·2	47	6·9	49	7·5	50	9·8	47	8·1	50	6·0	42	6·2
1881	60	9·2	46	7·4	51	6·3	47	5·8	42	6·4	39	6·7	45	6·5	46	9·5	42	8·6	45	9·7	51	7·7	44	8·7	46	8·8	51	9·0	46	7·7
1882	72	10·3	48	5·2	32	3·1	32	4·3	35	5·6	34	3·6	36	4·4	62	11·9	49	7·8	49	7·1	63	8·3	59	9·7	57	9·0	48	5·8	47	6·7
1883	65	8·9	52	6·5	53	5·8	51	6·4	49	7·4	49	7·5	51	6·7	56	12·2	51	8·5	55	10·4	63	10·2	57	13·8	57	11·0	63	8·8	54	8·9
1884	66	12·1	52	6·4	44	6·2	42	3·9	47	6·7	48	6·7	46	6·0	68	17·1	57	11·5	62	12·2	70	12·2	72	15·4	66	13·7	59	9·2	56	9·9
1885	63	9·1	46	5·4	45	4·4	48	5·3	50	6·1	45	7·3	47	5·7	57	11·9	53	7·7	54	9·1	57	8·4	58	11·8	56	9·8	62	8·2	52	7·8
Means for 10 years, 1876-85	—	9·7	—	6·7	—	5·2	—	5·4	—	6·3	—	6·8	—	6·1	—	11·9	—	9·2	—	9·8	—	9·3	—	11·0	—	10·2	—	—	—	8·2
1886	70	9·5	55	5·9	56	6·3	54	4·9	49	6·5	48	6·3	53	6·0	57	11·2	54	9·0	57	10·8	58	10·0	55	11·2	56	10·4	68	8·9	55	8·2
1887	60	12·1	43	5·3	38	3·8	33	3·8	35	4·1	34	4·1	36	4·2	47	9·7	38	5·9	38	5·5	47	7·3	40	7·6	41	7·2	42	4·3	39	5·7
1888	62	10·2	55	6·9	49	5·6	50	5·1	43	4·6	46	5·8	49	5·6	41	8·6	51	5·0	48	7·1	47	7·2	41	7·6	46	7·1	61	7·3	48	6·4
Means for 23 years, 1866-88	—	10·3	—	7·5	—	5·2	—	5·2	—	6·4	—	7·1	—	6·3	—	11·6	—	9·7	—	11·2	—	9·7	—	10·6	—	10·6	—	—	—	8·5

MEAN TEMPERATURE (in Degrees Fahrenheit).

YEARS.	0. Scotland, N.	Principal Wheat-producing Districts.						Principal Grazing, &c. Districts.							Channel Islands.	Means for the British Islands generally.
		1. Scotland, E.	2. England, N.E.	3. England, E.	4. Midland Counties.	5. England, S.	Means for Wheat-producing Districts.	6. Scotland, W.	7. England, N.W.	8. England, S.W.	9. Ireland, N.	10. Ireland, S.	Means for the &c. Grazing, Districts.			
1866	38°3	38°8	39°1	40°9	40°4	41°9	40°2	40°0	40°6	43°4	39°9	40°3	40°8	—	—	40°5
1867	36°9	37°2	36°8	38°6	38°2	39°2	38°0	37°7	38°6	41°4	38°1	39°9	39°1	—	—	38°6
1868	40°7	41°7	41°1	41°4	41°9	42°0	41°6	42°3	42°4	44°4	42°1	44°3	43°1	—	—	42°4
1869	40°0	40°3	40°6	41°1	41°2	42°0	41°0	42°0	42°1	45°1	42°9	44°6	43°3	—	—	42°2
1870	37°9	37°4	37°1	37°4	38°0	38°2	37°6	38°6	38°7	41°3	39°8	41°6	40°0	—	—	38°8
1871	40°0	39°7	38°8	39°2	40°1	40°3	39°6	40°0	40°0	43°3	41°6	43°4	41°7	—	—	40°7
1872	40°9	40°9	41°3	42°3	42°9	43°7	42°2	42°9	43°3	46°1	42°4	44°5	43°8	—	—	43°0
1873	39°0	38°4	38°5	38°9	39°1	39°9	39°0	39°2	39°7	42°6	39°8	41°0	40°5	—	—	39°8
1874	41°7	41°8	41°3	40°4	41°0	42°0	41°3	42°3	41°8	45°0	42°8	45°2	43°4	—	—	42°4
1875	39°5	39°0	38°8	38°6	39°2	40°2	39°2	39°8	40°2	42°9	41°6	44°6	41°8	—	—	40°5
Means for 10 years, 1866-75	39°5	39°5	39°3	39°9	40°2	40°9	40°0	40°5	40°7	43°6	40°1	42°9	41°8	—	—	40°9
1876	38°7	38°3	39°2	39°0	38°9	40°0	39°1	39°5	39°8	42°4	40°1	43°3	41°0	—	—	40°1
1877	38°4	38°8	40°4	41°7	41°8	43°1	41°2	40°5	41°8	44°9	41°4	45°2	42°8	—	—	42°0
1878	39°4	40°1	40°8	40°6	41°8	41°7	41°0	41°9	42°2	44°2	42°5	45°1	43°2	43°8	—	42°1
1879	35°8	34°2	35°9	36°5	36°4	37°8	36°2	36°5	36°8	40°8	38°0	40°5	38°5	42°4	—	37°4
1880	40°6	39°8	39°5	39°2	39°9	40°5	39°8	41°3	40°6	43°5	42°2	44°1	42°3	42°4	—	41°1
1881	34°4	33°5	34°3	36°1	35°8	38°2	35°6	35°3	36°6	39°9	37°5	39°8	37°8	44°5	—	36°7
1882	41°8	42°9	42°8	42°1	42°6	43°5	42°8	43°7	43°5	44°9	44°8	46°0	44°6	44°7	—	43°7
1883	38°7	38°8	38°8	39°0	39°2	40°8	39°3	40°2	40°1	42°2	40°9	42°5	41°2	44°8	—	40°3
1884	40°7	41°2	41°9	42°4	42°6	43°8	42°4	42°4	42°4	44°5	42°7	44°8	43°4	46°5	—	42°9
1885	38°4	38°3	39°2	39°2	39°3	40°7	39°3	39°6	39°7	41°9	40°6	42°2	40°8	43°9	—	40°1
Means for 10 years, 1876-85	38°7	38°6	39°3	39°6	39°8	41°0	39°7	40°1	40°4	42°9	41°1	43°4	41°6	—	—	40°6
1886	36°5	36°1	36°2	35°6	36°0	37°2	36°2	37°2	36°9	38°4	38°6	40°0	38°2	42°0	—	37°2
1887	39°4	39°2	38°7	37°5	37°8	38°7	38°4	39°8	39°0	40°4	41°3	42°3	40°6	42°7	—	39°5
1888	36°2	36°3	37°3	36°5	35°8	37°4	36°9	38°1	37°7	38°5	39°4	40°5	38°8	41°6	—	37°9
Means for 23 years, 1866-88	38°9	38°8	39°1	39°4	39°6	40°6	39°5	40°0	40°2	42°7	40°9	42°9	41°3	—	—	40°4

TABLE Ia.—SHOWING THE DATES OF THE DRIEST AND WETTEST, AND OF THE COLDEST AND WARMEST CORRESPONDING QUARTERS FOR THE TWENTY-THREE YEARS, 1866 TO 1888.

		Wheat Districts.	Grazing, &c. Districts.	Generally.
Rainfall	Driest	Ins. 4·2 in 1880 and 1887	Ins. 7·1 in 1888	Ins. 5·7 in 1887
	Wettest	9·0 in 1872	14·9 in 1872	12·0 in 1872
Temperature	Coldest	35°6 in 1881	37°8 in 1881	36°7 in 1881
	Warmest	42°8 in 1882	44°6 in 1882	43°7 in 1882

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TABLE II.—SHOWING THE RAINFALL, ACCUMULATED TEMPERATURE, AND BRIGHT SUNSHINE FOR EACH MONTH, AND THE PROGRESSIVE VALUES FROM THE COMMENCEMENT OF THE YEAR, FOR THE FIRST QUARTER, 1888.

YEAR AND MONTHS.	0. Scotland, N.		Principal Wheat-producing Districts.												Principal Grazing, &c. Districts.												Channel Islands.		Means for the British Islands generally.	
			1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for the &c. Grazing, Districts.					
	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.
1888.																														
Rainfall.—Numbers of Days with Rain.																														
January	18	18	14	14	11	11	10	10	10	10	9	9	11	11	14	14	12	12	14	14	13	13	10	10	13	13	17	17	12	12
February	20	38	17	31	15	26	15	25	12	22	13	22	14	25	12	26	17	29	13	27	14	27	12	22	14	27	19	36	14	26
March	24	62	24	55	23	49	25	50	21	43	24	46	23	48	15	41	22	51	21	48	20	47	19	41	19	46	25	61	21	47
Rainfall.—Amounts in Inches.																														
January	3·64	3·64	2·18	2·18	0·68	0·68	0·64	0·64	0·52	0·52	0·77	0·77	0·96	0·96	3·87	3·87	1·31	1·31	1·60	1·60	2·46	2·46	2·84	2·84	2·42	2·42	1·46	1·46	1·69	1·69
February	2·85	6·49	1·52	3·70	1·44	2·12	1·56	2·20	1·29	1·81	1·63	2·40	1·49	2·45	1·34	5·21	1·01	2·32	1·14	2·74	1·25	3·71	1·03	3·87	1·15	3·57	1·98	3·44	1·32	3·01
March	3·68	10·17	3·22	6·92	3·51	5·63	2·89	5·09	2·74	4·55	3·43	5·83	3·16	5·61	3·42	8·63	2·69	5·01	4·32	7·06	3·53	7·24	3·76	7·63	3·54	7·11	3·86	7·30	3·35	6·36
Accumulated Heat.—Day Degrees above 42° F.																														
January	32	32	36	36	25	25	26	26	29	29	26	26	28	28	32	32	24	24	39	39	58	58	76	76	46	46	70	70	37	37
February	7	39	8	44	11	36	8	34	14	43	16	42	11	39	20	52	6	30	19	58	19	77	29	105	19	65	32	102	15	52
March	5	44	10	54	24	60	37	71	38	81	41	83	30	69	23	75	28	58	48	106	37	114	66	171	40	105	66	168	35	87
Accumulated Heat.—Day Degrees below 42° F.																														
January	116	116	114	114	109	109	137	137	149	149	131	131	128	128	85	85	96	96	98	98	70	70	46	46	79	79	38	38	104	104
February	223	339	211	325	175	284	220	357	214	363	209	340	206	334	163	248	162	258	181	279	127	197	124	170	151	230	103	141	179	283
March	241	580	247	572	198	482	211	568	207	570	177	517	208	542	190	438	188	446	162	441	166	363	149	319	171	401	84	225	190	473
Bright Sunshine.—Numbers of Hours.																														
January	25	25	48	48	31	31	55	55	43	43	45	45	44	44	31	31	33	33	46	46	42	42	56	56	42	42	75	75	43	43
February	58	83	63	111	59	90	45	100	52	95	46	91	53	97	79	110	67	100	80	126	60	102	68	124	71	113	39	114	62	105
March	124	207	76	187	106	196	77	177	81	176	71	162	82	179	132	242	117	217	128	254	96	198	136	260	122	235	125	239	102	207
Bright Sunshine.—Percentages of possible Duration.																														
January	13	10	23	19	15	13	24	24	19	18	19	15	20	18	14	10	15	11	19	13	18	16	25	25	18	15	31	24	19	17
February	22	15	25	24	23	19	17	23	20	20	17	18	20	21	30	20	25	19	29	23	22	19	25	24	26	21	14	25	23	21
March	30	22	19	22	26	21	19	20	20	19	17	18	20	20	32	25	28	22	31	27	23	21	33	27	29	24	30	24	25	22

EXPLANATION OF TABLES.

TABLES I. and Ia. are merely in continuation of the Tables given in the Quarterly Summaries of the Weekly Weather Reports, 1884-87. The whole of the values for 1878-88, however, have been corrected by information received since they were first published.

TABLE II. In this Table the monthly values for *January* are those for the first four weeks in the year; those for *February* are for the fifth to the eighth weeks; those for *March* are for the ninth to the thirteenth weeks.

The figures given in the columns headed "From Jan. 3" are the values for the whole period elapsed since the beginning of the first week of the year.

In the "Means for the Wheat Districts" the values for District 0, and in the "Means for the "Grazing, &c. Districts" the values for the "Channel Islands," are not included.

The Means for the British Islands generally are those for the Wheat Districts and Grazing Districts combined.

(OFFICIAL COPY.)

QUARTERLY SUMMARY OF THE WEEKLY WEATHER REPORT, 1888.

VOL. V. APPENDIX I. *New Series.* SECOND QUARTER—APRIL TO JUNE. [*Price 4d.*

TABLE I.—SUMMARY OF RAINFALL AND MEAN TEMPERATURE, FOR THE SECOND QUARTER OF THE TWENTY-THREE YEARS, 1866 TO 1888.

	YEARS.	Principal Wheat-producing Districts.												Principal Grazing, &c. Districts.												Channel Islands.		Means for the British Islands generally.	
		0. Scotland, N.		1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat-producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for the Grazing, &c. Districts.					
		Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
RAINFALL (in Inches).	1866	—	6·2	—	4·8	—	5·2	—	6·0	—	6·3	—	6·7	—	5·8	—	5·1	—	6·3	—	6·5	—	6·7	—	8·2	—	6·6	—	—	—	6·2
	1867	—	10·6	—	8·0	—	6·8	—	6·2	—	6·7	—	5·8	—	6·7	—	10·5	—	8·3	—	10·0	—	10·0	—	9·3	—	9·6	—	—	—	8·2
	1868	—	10·9	—	6·1	—	3·7	—	3·2	—	3·3	—	4·1	—	4·1	—	7·7	—	4·4	—	5·9	—	6·6	—	6·3	—	6·2	—	—	—	5·2
	1869	—	6·7	—	5·3	—	7·5	—	5·0	—	7·5	—	6·6	—	6·4	—	4·8	—	7·6	—	8·2	—	7·7	—	7·8	—	7·2	—	—	—	6·8
	1870	—	9·5	—	4·1	—	4·3	—	2·3	—	2·5	—	2·4	—	3·1	—	7·4	—	5·7	—	4·2	—	6·4	—	4·6	—	5·7	—	—	—	4·4
	1871	—	4·3	—	6·1	—	7·5	—	7·5	—	7·5	—	7·7	—	7·3	—	8·3	—	7·7	—	8·4	—	7·5	—	7·7	—	7·9	—	—	—	7·6
	1872	—	11·4	—	10·4	—	7·4	—	6·6	—	8·6	—	8·5	—	8·3	—	11·2	—	12·0	—	10·9	—	9·8	—	7·6	—	10·3	—	—	—	9·3
	1873	—	7·9	—	5·9	—	4·8	—	4·7	—	5·6	—	4·3	—	5·1	—	5·1	—	4·7	—	5·9	—	6·3	—	5·1	—	5·4	—	—	—	5·3
	1874	—	10·0	—	4·5	—	3·4	—	3·9	—	3·9	—	5·3	—	4·2	—	5·5	—	5·0	—	4·5	—	6·8	—	4·2	—	5·2	—	—	—	4·7
	1875	—	8·7	—	5·5	—	4·2	—	4·9	—	6·4	—	6·0	—	5·4	—	6·5	—	7·6	—	9·8	—	7·0	—	6·5	—	7·5	—	—	—	6·4
	Means for 10 years, 1866-75	—	8·6	—	6·1	—	5·5	—	5·0	—	5·8	—	5·7	—	5·6	—	7·2	—	6·9	—	7·4	—	7·5	—	6·7	—	7·1	—	—	—	6·4
	1876	—	8·4	—	6·1	—	6·2	—	4·9	—	5·5	—	4·9	—	5·5	—	6·4	—	7·0	—	5·5	—	5·6	—	5·0	—	5·9	—	—	—	5·7
	1877	—	10·1	—	8·8	—	6·7	—	5·6	—	6·8	—	6·2	—	6·8	—	9·5	—	8·4	—	11·2	—	8·5	—	10·9	—	9·7	—	—	—	8·3
	1878	38	3·7	38	6·2	44	7·6	54	8·2	56	9·2	51	8·4	48	7·9	42	8·7	48	8·3	58	11·6	49	9·1	62	13·9	52	10·3	61	10·6	51	9·1
	1879	46	4·5	56	8·3	57	8·3	58	10·1	64	10·0	58	10·3	61	9·4	51	9·9	55	8·4	61	11·3	58	10·0	63	11·6	57	10·2	64	8·9	59	9·8
	1880	46	4·9	43	4·9	44	6·6	50	7·2	48	7·2	43	5·5	45	6·1	46	8·0	40	6·7	38	5·4	53	8·5	46	7·8	45	7·3	49	4·6	45	6·7
	1881	49	7·0	45	5·6	41	4·5	35	4·3	37	4·3	33	4·2	38	4·6	49	9·3	44	8·6	42	6·1	55	8·5	48	8·3	47	8·2	41	4·6	43	6·4
	1882	51	7·4	51	7·4	47	9·2	48	8·0	49	9·9	47	7·9	48	8·5	51	10·5	51	10·6	55	10·2	60	9·4	56	10·3	55	10·2	49	6·6	52	9·3
	1883	48	5·7	40	3·8	39	6·0	36	6·7	39	7·2	36	5·1	38	5·8	45	7·8	38	5·9	42	6·1	52	6·2	44	7·6	44	6·7	42	5·9	41	6·2
	1884	48	6·4	39	3·6	39	3·2	33	3·8	32	4·2	31	4·7	35	3·9	40	5·4	32	3·8	32	4·9	42	5·8	38	4·6	37	4·9	42	4·9	37	4·4
	1885	61	6·8	46	5·5	48	6·1	43	6·5	48	6·8	43	6·0	46	6·2	48	7·3	45	6·0	50	8·7	50	6·1	46	7·8	48	7·2	50	6·0	47	6·7
	Means for 10 years, 1876-85	—	6·5	—	6·0	—	6·5	—	6·4	—	7·1	—	6·3	—	6·5	—	8·3	—	7·4	—	8·1	—	7·8	—	8·8	—	8·1	—	—	—	7·3
	1886	59	6·7	46	6·4	46	6·1	43	5·2	50	9·4	45	6·4	46	6·7	48	8·8	49	9·4	46	7·3	50	7·9	50	8·2	49	8·3	50	6·2	48	7·5
	1887	45	6·2	32	3·7	33	3·0	35	3·6	31	4·0	31	3·8	32	3·6	34	5·8	27	3·8	29	3·5	29	4·5	26	3·3	29	4·2	35	3·8	31	3·9
	1888	56	8·5	44	7·1	43	5·1	43	5·1	41	6·0	42	6·2	43	5·9	49	11·4	43	6·4	46	7·5	50	9·8	49	10·1	47	9·0	50	6·6	45	7·5
	Means for 23 years, 1866-88	—	7·5	—	6·0	—	5·8	—	5·6	—	6·5	—	6·0	—	6·0	—	7·9	—	7·1	—	7·5	—	7·6	—	7·7	—	7·6	—	—	—	6·8
MEAN TEMPERATURE (in Degrees Fahrenheit).	1866	48°2		48°1		48°0		52°2		51°7		52°9		50°6		50°9		50°6		53°0		51°9		51°4		51°6		°		51°1	
	1867	47°2		49°9		48°5		52°7		53°2		52°8		51°2		51°1		51°6		53°6		53°1		52°9		53°5		—		51°9	
	1868	49°7		52°3		52°1		55°1		55°7		54°8		54°0		52°3		53°5		55°0		52°8		54°6		53°6		—		53°8	
	1869	47°7		49°4		49°2		50°9		51°6		51°7		50°6		50°1		50°3		53°5		51°3		52°6		51°6		—		51°1	
	1870	49°5		52°5		51°4		52°8		54°4		53°5		52°9		51°9		52°8		54°3		53°2		53°5		53°1		—		53°0	
	1871	47°2		48°4		47°9		49°5		51°7		51°2		49°7		50°8		50°7		53°7		52°4		53°9		52°3		—		51°0	
	1872	48°2		49°7		49°7		52°0		51°3		51°9		50°9		50°3		51°0		51°9		50°5		51°6		51°1		—		51°0	
	1873	47°9		49°8		49°1		49°8		51°6		51°7		50°4		51°7		51°3		52°5		51°9		53°2		52°1		—		51°3	
	1874	48°4		49°6		49°9		51°3		52°4		52°7		51°2		51°1		51°4		54°0		51°5		54°3		52°5		—		51°9	
	1875	49°3		51°4		51°2		52°4		52°8		52°9		52°1		51°7		52°0		53°1		51°9		53°3		52°4		—		52°3	
	Means for 10 years, 1866-75	48°3		50°1		49°7		51°9		52°5		52°6		51°4		51°2		51°5		53°5		52°1		53°1		52°3		—		51°8	
	1876	48°2		49°7		49°8		51°1		51°3		51°3		50°6		50°3		50°5		52°1		49°8		52°2		51°0		—		50°8	
	1877	46°6		47°5		48°4		50°8		51°1		51°8		49°9		49°1		49°5		52°3		49°3		52°2		50°5		—		50°2	
	1878	48°8		50°6		51°7		53°8		54°3		54°8		53°0		52°5		53°5		53°5		52°6		53°7		53°2		54°9		53°1	
	1879	45°0		46°8		47°5		48°8		49°0		49°8		48°4		48°4		48°6		50°0		48°4		50°0		49°1		50°7		48°8	
	1880	47°6		49°9		49°5		51°1		50°9		52°0		50°7		50°5		50°5		52°3		50°4		52°1		51°2		52°2		51°0	
	1881	46°8		50°1		50°6		52°6		52°9		53°5		51°9		50°8		51°8		52°5		51°8		52°8		51°9		53°4		51°9	
	1882	47°5		49°4		50°4		52°4		52°2		53°8		51°6		50°7		51°8		53°4		51°2		52°2		51°7		53°9		51°7	
	1883	47°3		50°1		50°2		52°1		52°2		52°9		51°5		50°0		51°0		51°7		50°5		51°5		50°9		52°6		51°2	
	1884	46°8		49°4		50°0		51°2		51°4		52°4		50°9		50°1		50°6		51°5		50°6		51°8		50°9		52°6		50°9	
	1885	45°8		48°6		49°0		50°5		50°2		51°8		50°0		48°3		49°0		50°0		48°7		49°6		49°1		51°1		49°6	
	Means for 10 years, 1876-85	47°0		49°2		49°7		51°4		51°6		52°4		50°9		50°1		50°7		51°8		50°3		51°8		50°9		—		50°9	
	1886	45°6		47°8		47°9		50°5		50°5		52°0		49°7		48°1		49°4		51°2		48°9		50°8		49°7		52°1		49°7	
	1887	48°4		50°5		50°3		51°4		52°0		52°4		51°3		51°0		51°2		52°6		52°2		53°3		52°1		53°2		51°7	
	1888	46°5		47°6		48°4		50°5		50°5		51°1		50°0		49°4		49°9		50°8		50°0		51°8		50°4		51°9		50°0	
	Means for 23 years, 1866-88	47°6		49°5		49°6		51°5		51°9		52°4		51°0		50°5		51°0		52°5		51°1		52°4		51°5		—		51°3	

TABLE Ia.—SHOWING THE DATES OF THE DRIEST AND WETTEST, AND OF THE COLDEST AND WARMEST CORRESPONDING QUARTERS FOR THE TWENTY-THREE YEARS, 1866 TO 1888.

		Wheat Districts.	Grazing, &c. Districts.	Generally.
Rainfall	Driest	Ins. 3·1 in 1870	Ins. 4·2 in 1887	Ins. 3·9 in 1887
	Wettest	9·4 in 1879	10·3 in 1872 and 1878 10·2 in 1879 and 1882	9·8 in 1879
Temperature	Coldest	48°4 in 1879	49°1 in 1879 and 1885	48°8 in 1879
	Warmest	54°0 in 1868	53°6 in 1868	53°8 in 1868

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TABLE II.—SHOWING THE RAINFALL, ACCUMULATED TEMPERATURE, AND BRIGHT SUNSHINE FOR EACH MONTH, AND THE PROGRESSIVE VALUES FROM THE COMMENCEMENT OF THE YEAR, FOR THE SECOND QUARTER, 1888.

YEAR AND MONTHS.	0. Scotland, N.		Principal Wheat-producing Districts.												Principal Grazing, &c. Districts.												Channel Islands.		Means for the British Islands generally.	
			1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for the Grazing, &c. Districts.					
	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.
RAINFALL.—NUMBERS OF DAYS WITH RAIN.																														
April	21	83	18	73	19	68	17	67	16	59	14	60	17	65	17	58	16	67	16	64	18	65	16	57	17	63	17	78	17	64
May	20	103	12	85	6	74	6	73	6	65	8	68	8	73	13	71	7	74	9	73	13	78	12	69	11	74	12	90	10	74
June	15	118	14	99	18	92	20	93	19	84	20	88	18	91	19	90	20	94	21	94	19	97	21	90	20	94	21	111	19	93
RAINFALL.—AMOUNTS IN INCHES.																														
April	2·92	13·09	1·71	8·63	1·87	7·50	1·53	6·62	1·49	6·04	1·54	7·37	1·63	7·24	2·72	11·35	1·59	6·60	1·62	8·68	1·93	9·18	2·05	9·68	1·98	9·10	1·87	9·17	1·81	8·18
May	2·72	15·76	1·33	9·96	0·36	7·86	0·69	7·31	0·76	6·80	1·20	8·57	0·87	8·11	2·88	14·23	0·79	7·39	1·37	10·05	1·64	10·82	2·21	11·89	1·78	10·88	1·07	10·24	1·33	9·51
June	2·84	18·60	4·04	14·00	2 85	10·71	2·83	10·14	3·76	10·56	3·41	11·98	3·38	11·49	5·76	19·99	3·97	11·36	4·47	14·52	6·24	17·06	5·80	17·69	5·25	16·13	3·67	13·91	4·32	13·83
ACCUMULATED HEAT.—DAY DEGREES ABOVE 42° F.																														
April	72	116	100	154	89	149	114	185	116	197	108	191	105	174	99	174	89	147	104	210	110	224	130	301	106	211	119	287	106	193
May	153	269	207	361	207	356	261	446	264	461	258	449	239	413	222	396	236	383	245	455	228	452	263	564	239	450	268	555	239	432
June	275	544	311	672	328	684	476	922	449	910	492	941	411	824	307	793	423	806	468	923	415	867	491	1055	439	889	502	1057	425	857
ACCUMULATED HEAT.—DAY DEGREES BELOW 42° F.																														
April	87	667	90	662	63	545	73	641	67	637	55	572	70	612	56	494	49	496	44	485	44	407	33	352	45	446	22	247	58	531
May	30	697	27	689	10	555	20	661	17	654	5	577	16	628	11	505	4	500	2	487	10	417	0	352	5	451	0	247	11	542
June	14	711	11	700	0	555	0	661	0	654	0	577	2	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	1	543
BRIGHT SUNSHINE.—NUMBERS OF HOURS.																														
April	105	312	129	316	83	279	111	288	84	260	100	262	101	280	116	358	94	311	119	373	86	284	108	368	105	340	142	381	103	310
May	157	469	196	512	191	470	197	485	197	457	199	461	196	476	193	551	184	495	219	592	198	482	211	579	201	541	263	644	199	509
June	254	723	235	747	165	635	179	664	162	619	174	635	183	659	232	783	187	682	189	781	203	685	191	770	200	741	221	865	192	701
BRIGHT SUNSHINE.—PERCENTAGES OF POSSIBLE DURATION.																														
April	26	24	33	24	22	23	29	22	22	21	26	20	26	22	30	28	24	25	32	29	22	22	28	29	27	27	37	28	27	25
May	34	26	44	28	43	26	46	26	45	24	47	24	45	26	43	30	42	27	51	32	45	25	48	31	46	29	63	34	46	28
June	41	29	39	31	28	27	31	29	28	27	31	28	31	28	39	32	32	29	33	34	35	28	33	33	34	31	40	38	33	30

1888.

EXPLANATION OF TABLES.

TABLES I. and IA. are merely in continuation of the Tables given in the Quarterly Summaries of the Weekly Weather Reports, 1884-87. The whole of the values for 1878-88, however, have been corrected by information received since they were first published.

TABLE II. In this Table the monthly values for *April* are those for the fourteenth to seventeenth weeks in the year; those for *May* are for the eighteenth to the twenty-first weeks; those for *June* are for the twenty-second to the twenty-sixth weeks of the year.

The figures given in the columns headed "From Jan. 3" are the values for the whole period elapsed since the beginning of the first week of the year.

In the "Means for the Wheat Districts" the values for District 0, and in the "Means for the "Grazing, &c. Districts" the values for the "Channel Islands," are not included.

The Means for the British Islands generally are those for the Wheat Districts and Grazing Districts combined.

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QUARTERLY SUMMARY OF THE WEEKLY WEATHER REPORT, 1888.

VOL. V. APPENDIX I.] *New Series.* THIRD QUARTER—JULY TO SEPTEMBER. [*Price 4d.*

TABLE I.—SUMMARY OF RAINFALL AND MEAN TEMPERATURE, FOR THE THIRD QUARTER OF THE TWENTY-THREE YEARS, 1866 TO 1888.

	YEARS.	Principal Wheat-producing Districts.												Principal Grazing, &c. Districts.										Channel Islands.		Means for the British Islands generally	
		0. Scotland, N.		1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat-producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for the &c. Grazing, Districts.			
		Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
RAINFALL (in Inches).	1866	—	11·8	—	10·6	—	9·3	—	7·9	—	11·7	—	9·7	—	9·8	—	15·1	—	16·1	—	15·2	—	12·0	—	8·9	—	13·5	—	11·7
	1867	—	10·0	—	10·1	—	7·1	—	7·1	—	7·4	—	8·6	—	8·1	—	12·9	—	10·4	—	8·7	—	11·8	—	8·8	—	10·3	—	9·3
	1868	—	9·7	—	10·4	—	6·0	—	4·2	—	7·1	—	7·2	—	7·0	—	9·1	—	6·7	—	9·5	—	8·1	—	11·0	—	8·9	—	8·0
	1869	—	12·8	—	7·0	—	5·8	—	5·6	—	6·4	—	6·0	—	6·2	—	10·4	—	11·5	—	9·9	—	9·4	—	8·5	—	9·9	—	8·1
	1870	—	8·6	—	5·8	—	3·5	—	5·8	—	4·5	—	4·8	—	4·9	—	6·8	—	5·0	—	7·0	—	7·6	—	5·7	—	6·4	—	5·7
	1871	—	13·0	—	8·7	—	9·7	—	7·5	—	10·8	—	10·3	—	9·4	—	9·8	—	11·8	—	14·2	—	11·1	—	10·5	—	11·5	—	10·5
	1872	—	12·1	—	12·5	—	10·4	—	9·8	—	9·4	—	6·6	—	9·7	—	16·1	—	15·8	—	13·1	—	14·7	—	11·2	—	14·2	—	12·0
	1873	—	13·7	—	11·8	—	7·2	—	6·4	—	6·8	—	7·3	—	7·9	—	15·7	—	11·8	—	14·0	—	14·2	—	11·8	—	13·5	—	10·7
	1874	—	15·5	—	11·6	—	5·8	—	5·1	—	7·1	—	6·3	—	7·2	—	13·4	—	12·6	—	13·8	—	11·8	—	10·1	—	12·3	—	9·8
	1875	—	11·2	—	8·9	—	9·1	—	8·6	—	11·5	—	9·4	—	9·5	—	11·2	—	12·7	—	15·3	—	9·2	—	10·6	—	11·8	—	10·7
	Means for 10 years, 1866-75	—	11·8	—	9·7	—	7·4	—	6·8	—	8·3	—	7·6	—	8·0	—	12·1	—	11·4	—	12·1	—	11·0	—	9·7	—	11·3	—	9·7
	1876	—	8·9	—	7·4	—	8·0	—	8·1	—	9·0	—	7·9	—	8·1	—	10·3	—	11·2	—	13·8	—	10·0	—	9·6	—	11·0	—	9·6
	1877	—	10·8	—	11·3	—	10·1	—	8·1	—	10·4	—	7·6	—	9·5	—	12·6	—	15·4	—	14·5	—	12·0	—	10·4	—	13·0	—	11·3
	1878	51	8·0	47	8·0	46	8·4	48	6·9	43	9·1	40	7·5	44	8·0	47	10·5	48	10·8	44	9·2	55	8·1	51	10·5	48	9·8	52	8·5	46	8·9
	1879	59	9·8	55	9·9	53	9·0	61	12·1	54	10·8	56	11·2	55	10·6	64	15·8	62	13·9	61	12·9	68	15·5	64	12·4	64	14·1	63	10·3	60	12·4
	1880	40	7·5	46	7·7	45	10·5	46	10·0	44	11·2	43	9·4	46	9·8	46	9·4	46	10·0	47	7·7	54	9·8	49	10·8	48	9·5	55	8·0	47	9·7
	1881	49	6·5	50	9·1	51	10·3	51	8·5	47	8·3	47	8·2	49	8·9	55	10·4	50	11·0	49	9·4	63	8·6	55	10·3	54	9·9	51	7·8	52	9·4
	1882	60	8·2	57	8·0	56	6·9	48	7·0	55	8·1	49	7·2	53	7·4	57	12·3	55	11·5	57	13·2	65	11·5	59	11·1	59	11·9	59	8·1	56	9·7
	1883	59	8·5	57	10·1	51	8·3	52	8·1	50	8·9	49	6·7	52	8·4	54	12·2	51	9·8	58	10·1	61	11·4	57	12·8	56	11·3	62	9·5	54	9·9
	1884	53	7·8	48	6·3	35	5·3	38	7·4	40	6·2	44	5·9	41	6·2	55	12·3	48	9·0	52	8·6	59	10·2	48	7·1	52	9·4	52	7·1	47	7·8
	1885	59	9·1	45	6·0	36	5·7	36	6·2	35	5·9	33	5·1	37	5·8	46	11·6	43	7·8	42	8·8	51	9·9	46	9·9	46	9·6	45	5·7	42	7·7
	Means for 10 years, 1876-85	—	8·4	—	8·4	—	8·3	—	8·2	—	8·8	—	7·7	—	8·3	—	11·7	—	11·2	—	10·8	—	10·7	—	10·5	—	10·9	—	9·6
	1886	59	8·7	43	5·0	41	6·8	38	6·5	30	6·4	35	5·8	39	6·1	48	11·4	42	10·3	40	9·3	54	9·3	53	10·9	47	10·2	48	7·2	43	8·2
	1887	63	10·3	53	7·6	44	6·1	42	5·4	35	5·2	35	5·8	42	6·0	49	10·8	43	7·1	37	7·3	55	10·5	46	7·9	46	8·7	40	6·2	44	7·4
	1888	55	9·3	52	7·1	49	9·2	53	8·4	48	7·9	46	7·9	50	8·1	53	10·6	50	10·5	53	11·0	54	10·3	44	9·3	51	10·3	51	8·6	51	9·2
	Means for 23 years, 1866-88	—	10·0	—	8·7	—	7·8	—	7·4	—	8·3	—	7·5	—	7·9	—	11·8	—	11·0	—	11·2	—	10·7	—	10·0	—	10·9	—	9·4
MEAN TEMPERATURE (in Degrees Fahrenheit).	1866	53°2		55°4		55°4		57°6		56°8		58°1		56°7		56°2		56°8		58°4		56°0		57°2		56°9		—		56°8	
	1867	53°7		56°0		55°9		58°8		58°5		59°2		57°7		57°2		58°2		60°0		58°5		59°4		58°7		—		58°2	
	1868	55°0		58°5		58°8		62°5		62°4		62°4		60°9		59°5		61°2		63°6		59°1		60°8		60°8		—		60°9	
	1869	54°4		57°4		57°6		60°2		60°5		60°3		59°2		58°2		59°1		61°4		59°5		59°8		59°6		—		59°4	
	1870	55°6		58°1		57°2		59°6		60°5		60°3		59°1		58°5		59°5		61°7		59°6		60°3		59°9		—		59°5	
	1871	55°1		57°4		57°5		59°9		59°5		60°1		58°9		57°3		58°3		60°6		57°2		58°0		58°3		—		58°6	
	1872	54°0		55°9		57°1		59°7		60°1		60°3		58°6		57°7		59°1		60°7		57°9		59°3		58°9		—		58°8	
	1873	54°1		56°4		57°3		59°1		58°7		59°4		58°2		57°4		57°8		59°5		56°6		57°9		57°8		—		58°0	
	1874	54°4		56°7		57°9		60°2		60°3		60°2		59°1		57°8		58°8		60°6		56°9		59°0		58°6		—		58°9	
	1875	54°8		57°0		57°8		59°7		59°6		60°2		58°9		58°4		58°7		60°6		57°5		60°0		59°0		—		59°0	
	Means for 10 years, 1866-75	54°4		56°9		57°3		59°7		59°7		60°1		58°7		57°8		58°8		60°7		57°9		59°2		58°9		—		58°8	
	1876	54°3		56°3		57°7		60°4		60°7		61°1		59°2		57°6		58°8		61°0		56°6		59°4		58°7		—		59°0	
	1877	52°7		55°0		55°5		57°9		57°7		58°2		56°9		55°3		56°0		58°3		55°1		57°3		56°4		—		56°7	
	1878	55°2		58°5		59°1		60°4		60°2		61°6		60°0		59°2		59°5		61°3		58°8		60°7		59°9		62°1		60°0	
	1879	52°4		54°2		56°2		58°1		57°8		58°7		57°0		55°2		56°2		57°5		54°8		57°5		56°2		58°5		56°6	
	1880	55°9		57°8		59°5		61°1		60°1		62°1		60°1		58°6		59°8		61°3		58°8		60°1		59°7		61°5		59°9	
	1881	52°1		56°8		56°8		58°6		57°7		59°4		57°9		54°8		56°4		57°5		55°8		56°4		56°2		59°8		57°1	
	1882	54°2		56°6		57°7		58°2		57°1		58°8		57°7		56°0		56°8		57°4		55°9		56°2		56°5		58°9		57°1	
	1883	52°9		55°8		56°9		58°5		57°7		59°5		57°7		55°9		57°2		57°5		55°8		56°9		56°7		59°1		57°2	
	1884	54°5		57°5		59°1		61°8		60°7		62°4		60°3		58°2		59°6		60°5		57°9		59°0		59°0		61°7		59°7	
	1885	51°7		55°0		56°2		58°0		57°7		59°6		57°3		54°8		56°2		57°7		55°7		57°3		56°3		59°6		56°8	
	Means for 10 years, 1876-85	53°6		56°4		57°5		59°3		58°7		60°1		58°4		56°6		57°7		59°0		56°5		58°1		57°6		—		58°0	
	1886	52°4		56°1		58°1		60°2		59°7		61°3		59°1		55°8		57°7		59°4		56°5		58°2		57°5		61°0		58°3	
	1887	52°9		55°8		57°1		59°1		58°2		59°7		58°0		55°6		57°5		58°7		56°5		58°4		57°3		61°2		57°7	
	1888	51°7		53°2		54°4		57°1		55°8		58°0		55°7		54°2		55°4		56°7		55°0		56°2		55°5		58°9		55°6	
	Means for 23 years, 1866-88	53°8		56°4		57°3		59°4		59°0		60°0		58°4		56°9		58°0		59°6		57°0		58°5		58°0		—		58°2	

TABLE Ia.—SHOWING THE DATES OF THE DRIEST AND WETTEST, AND OF THE COLDEST AND WARMEST CORRESPONDING QUARTERS FOR THE TWENTY-THREE YEARS, 1866 TO 1888.

		Wheat Districts.	Grazing, &c. Districts.	Generally.
Rainfall	Driest	Ins. 4·9 in 1870	Ins. 6·4 in 1870	Ins. 5·7 in 1870
	Wettest	10·6 in 1879	14·2 in 1872	12·4 in 1879
Temperature	Coldest	55°7 in 1888	55°5 in 1888	55°6 in 1888
	Warmest	60°9 in 1868	60°8 in 1868	60°9 in 1868

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TABLE II.—SHOWING THE RAINFALL, ACCUMULATED TEMPERATURE, AND BRIGHT SUNSHINE FOR EACH MONTH, AND THE PROGRESSIVE VALUES FROM THE COMMENCEMENT OF THE YEAR, FOR THE THIRD QUARTER, 1888.

YEAR AND MONTHS.	Principal Wheat-producing Districts.														Principal Grazing, &c. Districts.																Channel Islands.		Means for the British Islands generally.	
	0. Scotland, N.		1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for the Grazing, &c. Districts.							
	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.						
Rainfall.—Numbers of Days with Rain.																																
July	17	135	20	119	19	111	21	114	22	106	19	107	20	111	21	111	20	114	23	117	19	116	18	108	20	114	21	132	20	113		
August	18	153	17	136	15	126	14	128	12	118	12	119	14	125	18	129	15	129	17	134	19	135	15	123	17	131	15	147	16	129		
September	20	173	15	151	15	141	18	146	14	132	15	134	15	140	14	143	15	144	13	147	16	151	11	134	14	145	15	162	15	144		
Rainfall.—Amounts in Inches.																																
July	2·36	20·96	3·90	17·90	5·43	16·14	4·16	14·30	4·23	14·79	4·05	16·03	4·35	15·84	4·11	24·10	4·53	15·89	4·51	19·03	4·00	21·06	3·99	21·68	4·23	20·36	4·00	17·91	4·29	18·12		
August	3·38	24·34	1·71	19·61	1·55	17·69	2·11	16·41	1·39	16·18	1·72	17·75	1·70	17·54	3·42	27·52	2·81	18·70	2·53	21·56	3·40	24·46	2·91	24·59	3·01	23·37	1·74	19·65	2·36	20·48		
September	3·56	27·90	1·47	21·08	2·20	19·89	2·15	18·56	2·25	18·43	2·15	19·90	2·04	19·58	3·08	30·60	3·18	21·88	4·00	25·56	2·94	27·40	2·37	26·96	3·11	26·48	2·89	22·54	2·58	23·06		
Accumulated Heat.—Day Degrees above 42° F.																																
July	267	811	319	991	349	1033	429	1351	399	1309	448	1390	389	1213	363	1156	388	1194	421	1344	370	1237	409	1464	390	1279	453	1510	390	1247		
August	286	1097	345	1336	389	1422	452	1803	431	1740	474	1864	418	1631	367	1523	406	1600	431	1775	397	1634	437	1901	408	1687	496	2006	413	1660		
September	313	1410	329	1665	357	1779	454	2257	388	2128	499	2363	405	2036	342	1865	396	1996	445	2220	385	2019	414	2315	396	2083	561	2567	401	2061		
Accumulated Heat.—Day Degrees below 42° F.																																
July	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543		
August	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543		
September	13	724	8	708	0	555	0	661	0	654	0	577	2	632	0	505	0	500	0	487	0	417	0	352	0	451	0	247	1	544		
Bright Sunshine.—Numbers of Hours.																																
July	123	846	98	845	87	722	102	766	87	706	92	727	93	758	88	871	84	766	129	910	89	774	125	895	103	844	141	1006	98	799		
August	117	963	120	965	103	825	127	893	139	845	145	872	127	879	137	1008	141	907	155	1065	128	902	154	1049	143	987	193	1199	135	934		
September	97	1060	156	1121	131	956	170	1063	150	995	181	1053	156	1035	146	1154	158	1065	188	1253	109	1011	157	1206	152	1139	233	1432	154	1088		
Bright Sunshine.—Percentages of possible Duration.																																
July	26	31	21	31	19	26	23	28	20	26	21	27	21	28	20	32	19	28	29	34	20	28	28	33	23	31	32	38	22	30		
August	28	30	28	30	25	26	32	28	34	27	36	28	31	28	33	32	34	29	38	34	31	28	38	33	35	31	48	38	33	30		
September	22	39	35	30	29	26	39	29	34	28	41	29	36	28	33	32	36	29	43	35	25	28	35	33	34	31	53	40	35	30		

1888.

EXPLANATION OF TABLES.

TABLES I. and IA. are merely in continuation of the Tables given in the Quarterly Summaries of the Weekly Weather Reports, 1884-87. The whole of the values for 1878-88, however, have been corrected by information received since they were first published.

TABLE II. In this Table the monthly values for *July* are those for the twenty-seventh to thirtieth weeks in the year; those for *August* are for the thirty-first to the thirty-fourth weeks; those for *September* are for the thirty-fifth to the thirty-ninth weeks.

The figures given in the columns headed "From Jan. 3" are the values for the whole period elapsed since the beginning of the first week of the year.

In the "Means for the Wheat Districts" the values for District 0, and in the "Means for the "Grazing, &c. Districts" the values for the "Channel Islands," are not included.

The Means for the British Islands generally are those for the Wheat Districts and Grazing Districts combined.

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QUARTERLY SUMMARY OF THE WEEKLY WEATHER REPORT, 1888.

VOL. V. APPENDIX I.] *New Series.* FOURTH QUARTER—OCTOBER TO DECEMBER. [*Price 4d.*

TABLE I.—SUMMARY OF RAINFALL AND MEAN TEMPERATURE, FOR THE FOURTH QUARTER OF THE TWENTY-THREE YEARS, 1866 TO 1888.

RAINFALL (in Inches).

YEARS.	Principal Wheat-producing Districts.												Principal Grazing, &c. Districts.										Channel Islands.		Means for the British Islands generally.	
	0. Scotland, N.		1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat-producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for the Grazing, &c. Districts.					
	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
1866	—	20·6	—	9·0	—	6·0	—	5·9	—	6·7	—	6·3	—	6·8	—	14·4	—	15·3	—	12·4	—	11·9	—	9·2	—	12·6	—	—	—	9·7
1867	—	16·8	—	5·7	—	4·8	—	5·7	—	5·5	—	5·8	—	5·5	—	10·4	—	10·3	—	12·1	—	9·6	—	7·5	—	10·0	—	—	—	7·8
1868	—	19·0	—	10·3	—	9·5	—	7·9	—	9·7	—	11·4	—	9·8	—	15·1	—	18·5	—	18·3	—	14·0	—	14·3	—	16·0	—	—	—	12·9
1869	—	19·8	—	9·8	—	7·9	—	9·1	—	7·7	—	8·5	—	8·6	—	14·0	—	13·6	—	14·3	—	13·1	—	9·5	—	12·9	—	—	—	10·8
1870	—	16·0	—	9·3	—	10·5	—	8·4	—	8·6	—	9·5	—	9·3	—	10·6	—	16·0	—	15·9	—	14·6	—	12·2	—	13·9	—	—	—	11·6
1871	—	15·1	—	7·3	—	5·4	—	4·3	—	4·2	—	4·6	—	5·2	—	10·7	—	10·7	—	12·4	—	7·6	—	9·4	—	10·2	—	—	—	7·7
1872	—	18·0	—	15·0	—	11·6	—	10·6	—	12·0	—	16·5	—	13·1	—	16·3	—	17·4	—	25·1	—	16·8	—	17·6	—	18·6	—	—	—	15·9
1873	—	21·2	—	9·6	—	8·5	—	4·6	—	4·6	—	6·5	—	5·8	—	11·7	—	10·6	—	9·4	—	7·9	—	7·7	—	9·5	—	—	—	7·7
1874	—	17·8	—	9·2	—	8·0	—	7·0	—	7·4	—	10·6	—	8·4	—	14·4	—	15·0	—	16·0	—	13·0	—	12·7	—	14·2	—	—	—	11·3
1875	—	13·7	—	11·1	—	10·1	—	9·6	—	11·4	—	11·2	—	10·7	—	12·5	—	12·7	—	18·5	—	10·1	—	13·1	—	13·4	—	—	—	12·1
Means for 10 years, 1866–75	—	17·8	—	9·6	—	7·7	—	7·3	—	7·8	—	9·1	—	8·3	—	13·0	—	14·0	—	15·4	—	11·9	—	11·3	—	13·1	—	—	—	10·7
1876	—	13·7	—	13·2	—	10·5	—	7·5	—	11·7	—	13·4	—	11·3	—	16·0	—	14·1	—	19·1	—	14·4	—	17·6	—	16·2	—	—	—	13·8
1877	—	23·1	—	11·3	—	6·4	—	6·4	—	7·4	—	10·6	—	8·4	—	18·1	—	17·8	—	17·2	—	14·3	—	14·0	—	16·3	—	—	—	12·4
1878	72	11·1	53	8·1	60	10·4	57	9·6	51	7·8	48	8·3	54	8·8	45	11·0	55	9·1	64	13·3	65	11·7	53	8·1	56	10·6	74	15·4	55	9·7
1879	58	8·6	41	4·8	38	3·6	44	3·3	33	2·8	32	2·5	38	3·4	37	6·5	35	5·2	31	4·3	42	4·9	37	4·2	36	5·0	38	4·2	37	4·2
1880	75	12·6	54	8·2	50	9·8	58	9·4	49	11·0	51	12·9	54	10·3	57	12·2	53	13·6	58	16·4	60	9·6	53	12·4	56	12·8	69	18·2	55	11·6
1881	64	11·2	58	7·2	54	7·2	60	8·5	51	8·6	52	9·5	55	8·2	56	15·8	54	11·9	59	14·2	65	12·1	02	13·4	59	13·5	65	12·6	57	10·9
1882	71	11·9	67	11·4	72	11·2	69	11·7	71	13·0	67	12·6	69	12·0	63	16·9	67	13·2	74	19·8	65	12·5	68	14·8	67	15·4	83	19·0	68	13·7
1883	75	14·8	48	5·8	53	5·8	60	7·6	52	7·4	49	7·2	52	6·8	66	18·4	57	11·3	62	11·8	71	12·2	60	11·1	63	13·0	63	10·3	58	9·9
1884	68	14·6	52	6·9	44	5·1	50	6·9	47	5·3	42	6·0	47	6·0	52	16·1	51	8·7	57	10·2	64	13·2	54	9·8	56	11·6	62	8·7	52	8·8
1885	63	11·0	45	4·6	51	7·0	55	9·2	52	8·6	50	9·0	51	7·7	52	11·8	50	9·8	59	12·7	54	8·9	59	10·1	55	10·7	62	11·3	53	9·2
Means for 10 years, 1876–85	—	13·3	—	8·2	—	7·7	—	8·0	—	8·4	—	9·2	—	8·3	—	14·3	—	11·5	—	13·9	—	11·4	—	11·6	—	12·5	—	—	—	10·4
1886	75	14·3	60	7·8	56	10·0	58	9·5	64	10·9	67	14·4	61	10·5	65	16·8	69	14·3	75	19·1	71	15·5	69	16·0	70	16·3	85	16·3	66	13·4
1887	73	13·0	55	7·8	59	7·7	56	6·3	47	5·9	50	7·8	53	7·1	51	12·4	55	8·1	55	12·0	57	10·0	47	9·7	53	10·4	64	11·9	53	8·8
1888	69	15·9	57	9·3	46	5·7	42	5·6	43	8·4	50	8·6	48	7·5	57	16·8	56	10·1	61	14·0	66	10·4	63	13·8	61	13·0	66	10·2	55	10·3
Means for 23 years, 1866–88	—	15·4	—	8·8	—	7·7	—	7·6	—	8·1	—	9·3	—	8·3	—	13·9	—	12·5	—	14·7	—	11·7	—	11·7	—	12·9	—	—	—	10·6

MEAN TEMPERATURE (in Degrees Fahrenheit).

YEARS.	Principal Wheat-producing Districts.							Principal Grazing, &c. Districts.								
	0. Scotland, N.	1. Scotland, E.	2. England, N.E.	3. England, E.	4. Midland Counties.	5. England, S.	Means for Wheat-producing Districts.	6. Scotland, W.	7. England, N.W.	8. England, S.W.	9. Ireland, N.	10. Ireland, S.	Means for the Grazing, &c. Districts.	Channel Islands.	Means for the British Islands generally.
1866	43°6	44°2	45°1	46°1	45°7	46°8	45°6	46°0	46°2	50°3	45°4	46°9	47°0	°	46°3
1867	43·9	42·9	42·3	43·0	42·6	43·2	42·8	43·4	42·9	45·8	44·2	44·9	44·2	—	43·5
1868	42·0	42·0	43·1	44·8	44·3	45·5	43·9	43·6	44·2	48·1	44·0	45·5	45·1	—	44·5
1869	40·9	41·5	41·8	42·7	42·9	43·7	42·5	42·5	43·9	46·6	44·7	45·5	44·6	—	43·6
1870	40·3	40·0	40·3	41·6	41·3	41·9	41·0	40·5	41·6	44·4	41·5	43·2	42·2	—	41·6
1871	42·2	42·1	42·3	41·5	41·7	41·8	41·9	42·4	43·0	45·3	43·2	44·7	43·7	—	42·8
1872	42·4	42·0	43·3	44·4	44·2	45·4	43·9	43·6	44·4	47·3	42·8	44·1	44·4	—	44·2
1873	43·4	42·9	44·2	43·9	43·6	44·5	43·8	44·2	44·7	46·9	44·3	46·3	45·3	—	44·6
1874	41·4	39·9	40·8	41·8	41·7	43·0	41·4	40·5	42·3	46·0	42·8	45·7	43·5	—	42·5
1875	42·7	42·1	43·0	42·7	43·0	43·5	42·9	42·8	43·6	45·9	43·5	46·0	44·4	—	43·7
Means for 10 years, 1866–75	42·3	42·0	42·6	43·3	43·1	43·9	43·0	43·0	43·7	46·7	43·6	45·3	44·4	—	43·7
1876	44·0	43·4	45·2	46·2	44·8	47·2	45·4	44·6	46·1	49·0	45·7	48·1	46·7	—	46·1
1877	42·9	43·3	43·6	44·4	44·1	44·8	44·0	44·5	45·3	49·2	44·4	47·4	46·2	—	45·1
1878	40·5	39·7	39·8	40·8	40·7	42·3	40·7	40·9	41·5	44·5	42·1	42·8	42·4	47·4	41·6
1879	41·8	41·0	40·3	39·7	39·8	41·2	40·4	42·2	42·0	45·3	43·0	45·0	43·5	46·9	42·0
1880	39·1	40·4	42·4	43·6	42·7	45·3	42·9	42·2	43·6	47·7	42·9	44·9	44·3	49·7	43·6
1881	43·2	43·0	43·2	43·5	43·2	45·2	43·6	44·3	44·5	47·7	44·3	46·8	45·5	49·3	44·6
1882	41·3	40·1	43·6	43·5	42·8	45·5	42·9	42·2	44·0	46·5	42·8	44·6	44·0	49·3	43·5
1883	42·4	43·0	43·8	44·2	43·8	45·6	44·1	44·3	45·0	46·9	44·6	46·5	45·5	49·5	44·8
1884	44·4	42·6	43·8	43·6	43·3	45·3	43·7	43·8	44·4	46·2	44·1	45·1	44·7	49·3	44·2
1885	41·5	41·5	42·6	42·3	41·9	44·0	42·5	42·9	42·7	45·0	43·7	45·1	43·9	48·3	43·2
Means for 10 years, 1876–85	42·1	41·8	42·7	43·2	42·7	44·6	43·0	43·2	43·9	46·8	43·8	45·6	44·7	—	43·9
1886	42·6	42·5	43·6	43·9	43·5	45·6	43·8	44·4	44·7	46·3	44·2	45·8	45·1	49·8	44·5
1887	39·2	39·4	40·3	40·2	39·9	41·7	40·3	40·7	41·3	42·7	41·8	42·8	41·9	46·5	41·1
1888	43·2	43·4	44·1	43·9	43·8	46·1	44·3	45·1	45·3	47·1	45·5	47·0	46·0	50·6	45·2
Means for 23 years, 1866–88	42·1	41·9	42·7	43·1	42·8	44·3	43·0	43·1	43·8	46·6	43·7	45·4	44·5	—	43·8

TABLE Ia.—SHOWING THE DATES OF THE DRIEST AND WETTEST, AND OF THE COLDEST AND WARMEST CORRESPONDING QUARTERS FOR THE TWENTY-THREE YEARS, 1866 TO 1888.

		Wheat Districts.	Grazing, &c. Districts.	Generally.
Rainfall	Driest	Ins. 3·4 in 1879	Ins. 5·0 in 1879	Ins. 4·2 in 1879
	Wettest	13·1 in 1872	18·6 in 1872	15·9 in 1872
Temperature	Coldest	° 40·3 in 1887	° 41·9 in 1887	° 41·1 in 1887
	Warmest	45·6 in 1866	47·0 in 1866	46·3 in 1866

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TABLE II.—SHOWING THE RAINFALL, ACCUMULATED TEMPERATURE, AND BRIGHT SUNSHINE FOR EACH MONTH, AND THE PROGRESSIVE VALUES FROM THE COMMENCEMENT OF THE YEAR, FOR THE FOURTH QUARTER, 1888.

YEAR AND MONTHS.	0. Scotland, N.		Principal Wheat-producing Districts.										Means for Wheat producing Districts.		Principal Grazing, &c. Districts.										Means for the Grazing, &c. Districts.		Channel Islands.		Means for the British Islands generally.	
			1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.				6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.							
	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.	For the Month.	From Jan. 3.
1888.																														
Rainfall.—Numbers of Days with Rain.																														
October -	23	196	15	166	10	151	9	155	6	138	10	144	10	150	13	156	13	157	13	160	16	167	15	149	14	159	15	177	12	156
November -	21	217	23	189	18	169	16	171	20	158	21	165	20	170	22	178	23	180	24	184	24	191	23	172	23	182	25	202	22	178
December -	25	242	19	208	18	187	17	188	17	175	19	184	18	188	22	200	20	200	24	208	26	217	25	197	23	205	26	228	21	199
Rainfall.—Amounts in Inches.																														
October -	5·48	33·43	1·68	22·76	0·67	20·56	0·98	19·54	0·52	18·85	1·73	21·63	1·12	20·68	2·71	32·38	1·89	22·87	1·87	26·37	1·71	28·29	2·12	28·21	2·06	27·63	1·84	23·53	1·59	24·18
November -	6·71	40·14	4·75	27·51	3·00	23·56	2·84	22·38	4·82	23·67	4·03	25·66	3·89	24·57	7·18	39·56	5·15	28·02	6·70	33·07	4·05	32·34	4·30	32·51	5·48	33·11	4·37	27·90	4·69	28·87
December -	3·75	43·89	2·85	30·36	1·99	25·55	1·82	24·20	3·02	26·69	2·82	28·48	2·50	27·07	6·92	46·48	3·07	31·09	5·40	38·47	4·66	37·00	7·38	39·89	5·49	38·60	4·03	31·93	4·00	32·87
Accumulated Heat.—Day Degrees above 42° F.																														
October -	144	1554	181	1846	170	1949	179	2436	184	2312	214	2577	186	2222	186	2047	189	2185	226	2446	203	2220	236	2551	208	2290	281	2848	197	2257
November -	79	1633	99	1945	119	2068	143	2579	140	2452	194	2771	139	2361	129	2167	145	2330	194	2640	137	2357	196	2747	158	2448	238	3136	149	2406
December -	71	1704	49	1994	58	2126	73	2652	82	2534	105	2876	73	2434	82	2249	86	2416	127	2767	82	2439	131	2878	102	2550	208	3344	88	2494
Accumulated Heat.—Day Degrees below 42° F.																														
October -	31	755	22	730	34	589	69	730	77	731	45	622	49	681	15	520	18	518	19	506	10	427	16	368	16	467	0	247	33	577
November -	42	797	30	760	8	597	19	749	21	752	7	629	17	698	10	530	17	535	1	507	2	429	0	368	6	473	0	247	12	589
December -	106	903	152	912	115	712	138	887	132	884	72	701	122	820	73	603	78	613	66	573	89	518	75	443	76	549	1	248	99	688
Bright Sunshine.—Numbers of Hours.																														
October -	37	1097	57	1178	82	1038	110	1173	103	1098	114	1167	93	1128	64	1218	75	1140	107	1360	73	1084	81	1287	80	1219	150	1582	87	1175
November -	46	1143	26	1204	39	1077	38	1211	30	1128	28	1195	32	1160	29	1247	23	1163	38	1398	45	1129	46	1333	36	1255	43	1625	34	1209
December -	22	1165	29	1233	44	1121	56	1267	45	1173	50	1245	45	1205	30	1277	33	1196	61	1459	44	1173	54	1387	44	1299	85	1710	45	1254
Bright Sunshine.—Percentages of possible Duration.																														
October -	12	28	20	30	28	27	38	30	35	28	39	30	32	29	22	32	25	29	36	35	25	28	27	33	27	31	51	41	30	30
November -	20	28	11	29	17	26	16	30	13	28	12	29	14	28	11	30	10	29	15	34	19	27	19	33	15	31	17	40	15	30
December -	9	27	12	28	17	26	21	29	17	27	18	29	17	28	12	29	12	27	21	33	17	27	21	32	17	30	29	39	17	29

EXPLANATION OF TABLES.

TABLES I. and IA. are merely in continuation of the Tables given in the Quarterly Summaries of the Weekly Weather Reports, 1884-87. The whole of the values for 1878-87, however, have been corrected by information received since they were first published.

TABLE II. In this Table the monthly values for *October* are those for the fortieth to forty-third weeks in the year; those for *November* are for the forty-fourth to the forty-seventh weeks; those for *December* are for the forty-eight to the fifty-second weeks.

The figures given in the columns headed "From Jan. 3" are the values for the whole period elapsed since the beginning of the first week of the year.

In the "Means for the Wheat Districts" the values for District 0, and in the "Means for the "Grazing, &c. Districts" the values for the "Channel Islands," are not included.

The Means for the British Islands generally are those for the Wheat Districts and Grazing Districts combined.

ERRATA.—APPENDIX I. Quarterly Summary, Weekly Weather Report, Third Quarter 1888.

	Districts.										
Page 5.	4.	5.	Means (Wheat Districts).	6.	7.	8.	9.	10.	Means (Grazing Districts).	Channel Islands.	Means (British Islands).
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Rainfall 1888 should read - - - -	7·9	7·9	8·1	9·7	9·6	9·8	9·5	8·4	9·4	7·8	8·8
Means, 23 years 1866-88 should read - -	8·3	7·5	7·9	11·7	10·9	11·1	10·7	10·0	10·9	—	9·4

	Rainfall.—Amount in Inches.																			
Page 6.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.
September should read - - - -	2·15	18·33	2·15	19·90	2·02	19·56	2·15	29·67	2·28	20·98	2·94	24·50	2·12	26·58	1·50	26·09	2·20	25·57	2·04	21·69	2·11	22·59

SUMMARY OF THE WEEKLY WEATHER REPORT, 1888.

VOL. V. APPENDIX I.] *New Series.* VALUES FOR THE WHOLE YEAR. [*Price 4d.*

TABLE I.—SUMMARY OF RAINFALL AND MEAN TEMPERATURE, FOR THE WHOLE YEAR DURING THE TWENTY-THREE YEARS, 1866 TO 1888.

	YEARS.	Principal Wheat-producing Districts.												Principal Grazing, &c. Districts.										Channel Islands.		Means for the British Islands generally.	
		0. Scotland, N.		1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat-producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for the &c. Grazing, Districts.					
		Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.
RAINFALL (in inches).	1866	—	53·4	—	35·7	—	26·3	—	27·2	—	31·8	—	34·1	—	31·0	—	50·0	—	51·1	—	51·0	—	44·3	—	38·3	—	46·9	—	—	—	39·0
	1867	—	48·1	—	33·3	—	24·1	—	24·7	—	27·7	—	29·0	—	27·8	—	43·7	—	40·1	—	46·0	—	43·2	—	36·3	—	41·9	—	—	—	34·9
	1868	—	58·7	—	38·5	—	24·1	—	20·7	—	26·8	—	30·2	—	28·1	—	49·5	—	42·9	—	45·6	—	41·7	—	42·1	—	44·4	—	—	—	36·3
	1869	—	51·1	—	31·0	—	27·4	—	25·9	—	29·3	—	30·1	—	28·7	—	40·6	—	44·9	—	46·4	—	42·3	—	37·9	—	42·4	—	—	—	35·6
	1870	—	40·5	—	25·9	—	23·1	—	20·4	—	20·7	—	22·7	—	22·6	—	33·6	—	35·7	—	37·8	—	37·2	—	32·2	—	35·3	—	—	—	29·0
	1871	—	41·8	—	29·0	—	26·4	—	23·1	—	27·3	—	28·7	—	26·9	—	40·5	—	38·9	—	45·0	—	36·9	—	37·0	—	39·7	—	—	—	33·3
	1872	—	49·7	—	49·1	—	37·2	—	33·1	—	39·8	—	41·7	—	40·2	—	58·8	—	59·2	—	68·6	—	54·0	—	49·5	—	58·0	—	—	—	49·1
	1873	—	50·7	—	34·5	—	20·8	—	21·1	—	24·1	—	26·5	—	25·4	—	42·5	—	36·7	—	43·4	—	37·2	—	36·5	—	39·3	—	—	—	32·4
	1874	—	54·8	—	31·8	—	20·7	—	19·1	—	24·1	—	26·6	—	24·5	—	41·9	—	43·6	—	46·8	—	40·0	—	34·7	—	41·4	—	—	—	33·0
	1875	—	42·0	—	32·5	—	27·3	—	26·8	—	35·1	—	33·3	—	31·0	—	40·0	—	41·7	—	56·2	—	33·4	—	40·4	—	42·3	—	—	—	36·7
	Means for 10 years, 1866-75	—	49·1	—	34·1	—	25·7	—	24·2	—	28·7	—	30·3	—	28·6	—	44·1	—	43·5	—	48·7	—	41·0	—	38·5	—	43·2	—	—	—	35·9
	1876	—	44·4	—	36·2	—	31·0	—	27·2	—	34·4	—	33·7	—	32·5	—	44·8	—	44·3	—	49·3	—	40·0	—	42·2	—	44·1	—	—	—	38·3
	1877	—	55·9	—	41·2	—	30·3	—	27·7	—	32·9	—	35·1	—	33·4	—	54·4	—	57·0	—	57·1	—	48·2	—	46·7	—	52·7	—	—	—	43·1
	1878	235	32·2	178	26·6	195	31·3	211	29·2	193	30·1	181	29·2	191	29·3	187	41·1	202	35·4	207	40·2	229	37·2	218	40·2	207	38·8	243	40·6	199	34·1
	1879	217	28·3	198	29·9	203	26·0	227	31·7	199	29·7	197	32·2	203	29·9	199	40·7	195	34·1	207	39·8	228	37·1	219	39·4	209	38·2	228	35·2	206	34·1
	1880	210	32·4	184	26·3	180	30·2	192	29·0	176	33·7	175	32·4	181	30·3	198	39·9	179	36·4	190	36·4	216	35·4	198	40·9	196	37·8	223	36·8	189	34·1
	1881	222	33·8	199	29·3	197	28·2	193	27·0	177	27·7	171	28·6	187	28·2	206	45·0	190	40·1	195	39·3	234	36·9	209	40·7	206	40·4	208	38·9	197	34·3
	1882	254	37·9	223	32·0	207	30·4	197	30·9	210	36·5	197	31·4	206	32·2	233	51·5	222	43·1	235	50·4	253	41·6	240	45·9	237	46·5	230	39·5	222	39·4
	1883	247	37·9	197	26·3	196	25·9	199	28·9	190	30·8	183	26·5	193	27·7	221	50·6	197	35·4	217	38·5	247	40·0	218	45·3	220	42·0	250	34·5	207	34·9
	1884	235	40·8	191	23·1	162	19·9	163	22·0	166	22·4	165	23·3	169	22·1	215	50·9	188	33·0	203	35·9	235	41·4	207	36·9	209	39·6	215	29·9	189	30·9
	1885	246	35·0	182	21·5	180	23·2	182	27·2	185	27·4	171	27·4	180	25·3	203	42·6	191	31·3	205	39·3	212	33·3	209	39·6	204	37·2	219	31·2	192	31·3
	Means for 10 years, 1876-85	—	37·9	—	29·2	—	27·6	—	28·1	—	30·6	—	30·0	—	29·1	—	46·2	—	39·0	—	42·6	—	39·1	—	41·8	—	41·7	—	—	—	35·4
	1886	263	39·1	204	24·9	199	29·2	193	26·2	202	33·1	195	32·9	199	29·3	218	48·1	214	43·0	218	46·5	234	42·8	227	46·3	222	45·3	251	38·6	211	37·3
	1887	241	41·6	183	24·4	174	20·6	166	19·1	148	19·2	150	21·5	164	21·0	181	38·7	163	24·9	159	28·3	188	32·3	159	28·5	170	30·5	181	26·2	167	25·8
	1888	242	43·9	208	30·4	187	25·6	188	24·2	175	26·8	184	28·5	188	27·1	200	46·5	200	31·1	208	38·4	217	36·9	197	39·9	205	38·6	228	31·9	199	32·9
	Means for 23 years, 1866-88	—	43·2	—	31·0	—	26·5	—	25·8	—	29·2	—	29·8	—	28·5	—	45·0	—	40·2	—	44·6	—	39·7	—	39·9	—	41·9	—	—	—	35·2
MEAN TEMPERATURE (in Degrees Fahrenheit).	1866	45°8		46°6		46°9		49°2		48°7		49°9		48°3		48°3		48°6		51°3		48°3		49°0		49°1		°		48°7	
	1867	45·4		46·5		45·9		48·3		47·9		48·6		47·4		47·4		47·8		50·2		48·5		49·3		48·6		—		48·0	
	1868	46·9		48·6		48·8		51·0		51·1		51·2		50·1		49·4		50·3		52·8		49·5		51·3		50·7		—		50·4	
	1869	45·8		47·2		47·3		48·7		49·1		49·4		48·3		48·2		48·9		51·7		49·6		50·6		49·8		—		49·1	
	1870	45·8		47·0		46·5		47·9		48·6		48·5		47·7		47·4		48·2		50·4		48·5		49·7		48·8		—		48·3	
	1871	46·1		46·9		46·6		47·5		48·3		48·4		47·5		47·6		48·0		50·7		48·6		50·0		49·0		—		48·3	
	1872	43·4		47·1		47·9		49·6		49·6		50·3		48·9		48·6		49·5		51·5		48·4		49·9		49·6		—		49·3	
	1873	46·1		46·9		47·3		47·9		48·3		48·9		47·9		48·1		48·4		50·4		48·2		49·6		48·9		—		48·4	
	1874	46·5		47·0		47·5		48·4		48·9		49·5		48·3		47·9		48·6		51·4		48·5		51·1		49·5		—		48·9	
	1875	46·6		47·4		47·7		48·4		48·7		49·2		48·3		48·2		48·6		50·6		48·3		51·0		49·4		—		48·9	
	Means for 10 years, 1866-75	46·1		47·1		47·2		48·7		48·9		49·4		48·3		48·1		48·7		51·1		48·7		50·2		49·4		—		48·9	
	1876	46·3		46·9		48·0		49·2		48·9		49·9		48·6		48·0		48·8		51·1		48·1		50·8		49·4		—		49·0	
	1877	45·2		46·2		47·0		48·7		48·7		49·5		48·0		47·4		48·2		51·2		47·6		50·5		49·0		—		48·5	
	1878	46·0		47·2		47·9		48·9		49·3		50·1		48·7		48·6		49·2		50·9		49·0		50·6		49·7		52·1		49·2	
	1879	43·8		44·1		45·0		45·8		45·8		46·9		45·5		45·6		45·9		48·4		46·1		48·3		46·9		49·6		46·2	
	1880	45·8		47·0		47·7		48·8		48·4		50·0		48·4		48·2		48·6		51·2		48·6		50·3		49·4		51·5		48·9	
	1881	44·1		45·4		46·2		47·7		47·4		49·1		47·2		46·3		47·3		49·4		47·4		49·0		47·9		51·8		47·6	
	1882	46·2		47·3		48·4		49·1		48·7		50·4		48·8		48·2		49·0		50·3		48·7		49·8		49·2		51·7		49·0	
	1883	45·3		46·9		47·4		48·5		48·2		49·7		48·1		47·6		48·3		49·6		48·0		49·4		48·6		51·5		48·4	
	1884	46·6		47·7		48·7		49·8		49·5		51·0		49·3		48·6		49·3		50·7		48·8		50·2		49·5		52·5		49·4	
	1885	44·4		45·9		46·8		47·5		47·3		49·0		47·3		46·4		46·9		48·7		47·2		48·6		47·6		50·7		47·5	
	Means for 10 years, 1876-85	45·4		46·5		47·3		48·4		48·2		49·6		48·0		47·5		48·2		50·2		48·0		49·8		48·7		—		48·4	
	1886	44·3		45·6		46·4		47·5		47·4		49·0		47·2		46·3		47·1		48·8		47·0		48·7		47·6		51·2		47·4	
	1887	45·0		46·2		46·6		47·1		47·0		48·1		47·0		46·8		47·3		48·6		48·0		49·2		48·0		50·9		47·5	
	1888	44·4		45·1		46·1		47·0		46·7		48·2		46·6		46·7		47·1		48·3		47·5		48·9		47·7		50·8		47·2	
	Means for 23 years, 1866-88	45·6		46·6		47·2		48·4		48·4		49·3		48·0		47·6		48·3		50·4		48·2		49·8		48·9		—		48·5	

TABLE Ia.—SHOWING THE DATES OF THE DRIEST AND WETTEST, AND OF THE COLDEST AND WARMEST YEARS FOR THE TWENTY-THREE YEARS, 1866 TO 1888.

		Wheat Districts.	Grazing, &c. Districts.	Generally.
Rainfall	Driest	Ins. 21·0 in 1887	Ins. 30·5 in 1887	Ins. 25·8 in 1887
	Wettest	40·2 in 1872	58·0 in 1872	49·1 in 1872
Temperature	Coldest	° 45·5 in 1879	° 46·9 in 1879	° 46·2 in 1879
	Warmest	50·1 in 1868	50·7 in 1868	50·4 in 1868

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NOTES.

1.—Rainfall.

The mean values for the Rainfall in the districts given as Table I. in the various Quarterly Summaries were obtained as follows. Those for the years 1866 to 1877 were derived from observations made at the following stations:—

Districts	Stations
0. SCOTLAND, N.	Loch Broom.
	Helmsdale.
	Sandwick Manse.
1. SCOTLAND, E.	Inverness.
	Aberdeen.
	Ballater.
	Logierait.
	Stirling.
	Hawick.
2. ENGLAND, N.E.	N. Shields.
	York.
	Grimsby.
	Boston.
3. ENGLAND, E. (1866 to 1875.)	Fakenham.
	Beccles.
	Witham.
	Bury St. Edmunds.
3. ENGLAND, E. (1876 &1877.)	Yarmouth.
	Cambridge.
	Bury St. Edmunds.
4. MIDLAND COUNTIES	Leicester.
	Derby.
	Tenbury.
	Shiffnal.
	Cirencester.
	Banbury.
	Hitchin.
5. ENGLAND, S.	Bridport.
	Selborne.
	Maidstone.
	London (Camden Town).
6. SCOTLAND, W.	Dumfries.
	Ayr.
	Castle Toward.
7. ENGLAND, N.W., and N. WALES	Llandudno.
	Manchester.
	Skipton.
8. ENGLAND, S.W., and S. WALES	Barnstaple.
	Bodmin.
	Haverfordwest.
	Rhayader.
9. IRELAND, N.	Galway.
	Bunninadden, Co. Sligo. (Doo Castle.)
	Waringstown.
	Strabane.
10. IRELAND, S.	Cork.
	Waterford.
	Killaloe.
	Portarlington.
	Monkstown, Co. Dublin.

(The values were obtained mainly from Symons' Monthly Meteorological Magazine, supplemented by some of the values contained in the Reports of the Rainfall Committee of the British Association, 1868–1876.)

2.—Temperature.

The Temperature values for the years 1866 to 1877 have been obtained from the following stations:—

Districts.	Stations.
0. SCOTLAND, N.	Sandwick Manse.
	Stornoway.
	Dunrobin.
1. SCOTLAND, E.	Culloden.
	Aberdeen.
	Perth.
	Leith.
2. ENGLAND, N.E.	Bywell.
	N. Shields.
	Hull.
3. ENGLAND, E.	Royston.
	Holkham.
	Norwich.
	Wisbeach.
	Somerleyton.
4. MIDLAND COUNTIES	Derby.
	Nottingham.
	Cardington.
	Oxford.
5. ENGLAND, S.	Marlborough.
	Greenwich.
	Streatley.
	London (Camden Town).
	Weybridge.
	Strathfield Turgiss.
	Osborne.
	Bournemouth.
	Worthing.
6. SCOTLAND, W.	Greenock.
	Cockermouth.
	Silloth.
	Carlisle.
7. ENGLAND, N.W., and N. WALES	Stonyhurst.
	Bradford.
	Leeds.
	Eccles.
	Liverpool.
	Llandudno.
8. ENGLAND, S.W., and S. WALES	Gloucester.
	Taunton.
	Barnstaple.
	Truro.
	Helston.
9. IRELAND, N. (1866 to 1873.)	Belfast.
	Milltown (Banbridge).
	Armagh.†
	Athlone.*
9. IRELAND, N. (1874 to 1877.)	Moville.
	Milltown.
	Armagh.
	Donaghadee.
10. IRELAND, S. (1866 to 1873.)	Dublin.*
	Curragh Camp.
	Buttevant.*
	Cork.
	Valencia.†
10. IRELAND, S. (1874 to 1877.)	Kingstown.
	Parsonstown.
	Cork.
	Roche's Point.
	Valencia.

(The values were obtained mainly from the returns published quarterly by the Registrar General, by the Scottish Meteorological Society (in their Quarterly Journal), and the reports of the Army Medical Department, besides the records of the two Irish observatories, Valencia and Armagh. The returns for Cork were furnished by R. Caulfield, Esq., LL.D.)

For the years 1878 to 1888 the means are obtained from the observations published in the Weekly Weather Report.

* Did not commence till January 1867.

† Did not commence till January 1869.

By Order,
ROBERT H. SCOTT, Secretary.

ERRATA.—APPENDIX I. Quarterly Summary Weekly Weather Report, Third Quarter, 1888.

Page 5.	DISTRICTS.										
	4.	5.	Means (Wheat Districts).	6.	7.	8.	9.	10.	Means (Grazing Districts).	Channel Islands.	Means (British Islands).
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Rainfall 1888 should read - -	7·9	7·9	8·1	9·7	9·6	9·8	9·5	8·4	9·4	7·8	8·8
Means, 23 years 1866–88 should read -	8·3	7·5	7·9	11·7	10·9	11·1	10·7	10·0	10·9	—	9·4

Page 6.	RAINFALL.—AMOUNT IN INCHES.																					
	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.	For Month.	From Jan. 3.
September should read - -	2·15	18·33	2·15	19·90	2·02	19·56	2·15	29·67	2·28	20·98	2·94	24·50	2·12	26·58	1·50	26·09	2·20	25·57	2·04	21·69	2·11	22·59

(OFFICIAL COPY.)

WEEKLY WEATHER REPORT, 1888.

VOL. V. APPENDIX II.] [*Price* 1*s*.
Second Series.

TABLE I.—SHOWING THE WEEKLY AND PROGRESSIVE NUMBERS OF RAINY DAYS IN EACH DISTRICT, DURING THE YEAR 1888.

DATE. — LIMITS OF WEEKS.	Principal Wheat-producing Districts.														Principal Grazing, &c. Districts.												Channel Islands.		Means for the British Islands generally.	
	0. Scotland, N.		1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for Grazing, &c. Districts.					
	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.
	Numbers of Days with Rain.																													
1888.																														
Jan. 3-9	6	6	4	4	2	2	3	3	3	3	3	3	3	3	6	6	5	5	5	5	5	5	4	4	5	5	7	7	4	4
10-16	2	8	2	6	2	4	1	4	1	4	0	3	1	4	0	6	0	5	1	6	0	5	0	4	1	6	1	8	1	5
17-23	4	12	2	8	2	6	2	6	2	6	2	5	2	6	3	9	3	8	4	10	3	8	3	7	3	9	5	13	2	7
24-30	6	18	6	14	5	11	4	10	4	10	4	9	5	11	5	14	4	12	4	14	5	13	3	10	4	13	4	17	5	12
Jan. 31-Feb. 6	6	24	4	18	3	14	3	13	2	12	2	11	2	13	4	18	4	16	3	17	4	17	3	13	4	17	4	21	3	15
Feb. 7-13	6	30	3	21	3	17	5	18	4	16	5	16	4	17	5	23	6	22	5	22	5	22	4	17	5	22	6	27	5	20
14-20	5	35	6	27	5	22	5	23	4	20	4	20	5	22	2	25	4	26	4	26	4	26	4	21	4	26	6	33	4	24
21-27	3	38	4	31	4	26	2	25	2	22	2	22	3	25	1	26	3	29	1	27	1	27	1	22	1	27	3	36	2	26
Feb. 28-Mar. 5	4	42	4	35	3	29	3	28	2	24	3	25	3	28	1	27	3	32	2	29	2	29	3	25	2	29	2	38	3	29
Mar. 6-12	6	48	6	41	5	34	5	33	5	29	5	30	5	33	5	32	6	38	6	35	6	35	5	30	5	34	7	45	5	34
13-19	3	51	3	44	4	38	5	38	4	33	5	35	4	37	2	34	3	41	3	38	2	37	3	33	3	37	5	50	3	37
20-26	5	56	6	50	5	43	6	44	5	38	5	40	5	42	4	38	5	46	5	43	5	42	4	37	5	42	6	56	5	42
Mar. 27-April 2	6	62	5	55	6	49	6	50	5	43	6	46	6	48	3	41	5	51	5	48	5	47	4	41	4	46	5	61	5	47
April 3-9	4	66	3	58	3	52	5	55	3	46	2	48	3	51	2	43	1	52	2	50	3	50	3	44	2	48	3	64	2	49
10-16	7	73	5	63	5	57	4	59	5	51	5	53	5	56	6	49	6	58	6	56	6	56	5	49	6	54	6	70	6	55
17-23	5	78	6	69	7	64	6	65	6	57	6	59	6	62	4	53	5	63	6	62	4	60	4	53	5	59	7	77	5	[illegible]
April 24-30	5	83	4	73	4	68	2	67	2	59	1	60	3	65	5	58	4	67	2	64	5	65	4	57	4	63	1	78	4	64
May 1-7	7	90	5	78	2	70	3	70	3	62	3	63	3	68	6	64	4	71	4	68	6	71	4	61	5	68	4	82	4	68
8-14	5	95	2	80	0	70	0	70	1	63	1	64	1	69	2	66	0	71	1	69	2	73	2	63	1	69	1	83	1	69
15-21	5	100	4	84	3	73	3	73	2	65	3	67	3	72	5	71	3	74	4	73	4	77	5	68	4	73	5	88	4	73
22-28	3	103	1	85	1	74	0	73	0	65	1	68	1	73	0	71	0	74	0	73	1	78	1	69	1	74	2	90	1	74
May 29-June 4	6	109	5	90	4	78	2	75	2	67	1	69	3	76	6	77	5	79	3	76	5	83	5	74	5	79	4	94	4	78
June 5-11	5	114	4	94	4	82	4	79	5	72	5	74	4	80	5	82	5	84	5	81	6	89	6	80	5	84	6	100	5	83
12-18	3	117	2	96	3	85	5	84	3	75	4	78	3	83	3	85	3	87	4	85	3	92	3	83	3	87	3	103	3	86
19-25	0	117	0	96	3	88	4	88	4	79	4	82	3	86	1	86	2	89	3	88	0	92	2	85	2	89	2	105	2	88
June 26-July 2	1	118	3	99	4	92	5	93	5	84	6	88	5	91	4	90	5	94	6	94	5	97	5	90	5	94	6	111	5	93
July 3-9	4	122	5	104	3	95	5	98	5	89	4	92	5	96	4	94	4	98	5	99	4	101	4	94	4	98	4	115	5	98
10-16	5	127	6	110	6	101	5	103	5	94	4	96	5	101	5	99	4	102	4	103	4	105	2	96	4	102	3	118	4	102
17-23	4	131	4	114	4	105	4	107	5	99	5	101	4	105	6	105	6	108	7	110	6	111	6	102	6	108	7	125	5	107
24-30	4	135	5	119	6	111	7	114	7	106	6	107	6	111	6	111	6	114	7	117	5	116	6	108	6	114	7	132	6	113
July 31-Aug. 6	5	140	4	123	5	116	5	119	4	110	5	112	5	116	4	115	4	118	4	121	5	121	4	112	4	118	3	135	5	118
Aug. 7-13	6	146	5	128	3	119	1	120	2	112	1	113	2	118	6	121	3	121	3	124	5	126	3	115	4	122	3	138	3	121
14-20	2	148	2	130	2	121	3	123	2	114	2	115	2	120	2	123	2	123	3	127	2	128	2	117	2	124	4	142	2	123
21-27	5	153	6	136	5	126	5	128	4	118	4	119	5	125	6	129	6	129	7	134	7	135	6	123	7	131	5	147	6	129
Aug. 28-Sept. 3	7	160	6	142	5	131	6	134	4	122	4	123	5	130	5	134	5	134	5	139	6	141	5	128	5	136	4	151	5	134
Sept. 4-10	4	164	3	145	4	135	5	139	4	126	5	128	4	134	3	137	4	138	3	142	3	144	2	130	3	139	3	154	4	138
11-17	4	168	2	147	2	137	2	141	1	127	1	129	2	136	2	139	2	140	0	142	2	146	1	131	2	141	0	154	2	140
18-24	2	170	1	148	1	138	2	143	2	129	1	130	1	137	0	139	0	140	0	142	1	147	0	131	0	141	1	155	0	140
Sept. 25-Oct. 1	3	173	3	151	3	141	3	146	3	132	4	134	3	140	4	143	4	144	5	147	4	151	3	134	4	145	7	162	4	144
Oct. 2-8	6	179	4	155	3	144	4	150	3	135	4	138	3	143	4	147	5	149	6	153	6	157	5	139	5	150	6	168	4	148
9-15	6	185	3	158	3	147	2	152	0	135	1	139	2	145	3	150	2	151	3	155	2	159	2	141	2	152	4	172	2	150
16-22	4	189	2	160	1	148	0	152	0	135	0	139	1	146	1	151	0	151	0	155	2	161	2	143	1	153	1	173	1	151
23-29	7	196	6	166	3	151	3	155	3	138	5	144	4	150	5	156	6	157	5	160	6	167	6	149	6	159	4	177	5	156
Oct. 30-Nov. 5	5	201	6	172	5	156	5	160	6	144	6	150	6	156	4	160	6	163	7	167	6	173	6	155	6	165	7	184	6	162
Nov. 6-12	2	203	3	175	2	158	3	163	4	148	5	155	3	159	4	164	4	167	6	173	5	178	6	161	5	170	7	191	4	166
13-19	7	210	7	182	6	164	5	168	6	154	6	161	6	165	7	171	7	174	6	179	6	184	5	166	6	176	6	197	6	172
20-26	7	217	7	189	5	169	3	171	4	158	4	165	5	170	7	178	6	180	5	184	7	191	6	172	6	182	5	202	6	178
Nov. 27-Dec. 3	4	221	6	195	6	175	5	176	6	164	6	171	6	176	5	183	5	185	7	191	6	197	6	178	6	188	7	209	6	184
Dec. 4-10	5	226	3	198	2	177	3	179	3	167	3	174	3	179	4	187	3	188	4	195	5	202	5	183	4	192	5	214	4	188
11-17	5	231	2	200	1	178	0	179	1	168	1	175	1	180	3	190	2	190	2	197	3	205	3	186	2	194	2	216	1	189
18-24	5	236	4	204	4	182	4	183	4	172	5	180	4	184	5	195	5	195	6	203	6	211	7	193	6	200	6	222	5	194
Dec. 25-31	6	242	4	208	5	187	5	188	3	175	4	184	4	188	5	200	5	200	5	208	6	217	4	197	5	205	6	228	5	199

A 57060. 350.—1/89. Wt. 37. E. & S.

TABLE II.—SHOWING THE WEEKLY AND PROGRESSIVE AMOUNTS OF RAINFALL IN EACH DISTRICT, DURING THE YEAR 1888.

DATE. — LIMITS OF WEEKS.	0. Scotland, N.		Principal Wheat-producing Districts.												Principal Grazing, &c. Districts.										Channel Islands.		Means for the British Islands generally.	
			1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat-producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for Grazing, &c. Districts.					
	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.
	Rainfall in Inches.																											
1888.																												
Jan. 3-9	1·12	1·12	1·12	1·12	0·05	0·05	0·08	0·08	0·07	0·07	0·22	0·22	0·31	0·31	2·15	2·15	0·43	0·43	0·49	0·49	1·41	1·41	2·11	2·11	1·32	1·32	0·52	0·52	0·81	0·81
10-16	0·05	1·17	0·05	1·17	0·09	0·14	0·05	0·13	0·04	0·11	0·04	0·26	0·05	0·36	0·02	2·17	0·04	0·47	0·07	0·56	0·00	1·41	0·03	2·14	0·03	1·35	0·10	0·62	0·04	0·85
17-23	0·59	1·76	0·14	1·31	0·15	0·29	0·18	0·31	0·20	0·31	0·33	0·59	0·20	0·56	0·68	2·85	0·38	0·85	0·69	1·25	0·38	1·79	0·53	2·67	0·53	1·88	0·57	1·19	0·37	1·22
24-30	1·88	3·64	0·87	2·18	0·39	0·68	0·33	0·64	0·21	0·52	0·18	0·77	0·40	0·96	1·02	3·87	0·46	1·31	0·35	1·60	0·67	2·46	0·17	2·84	0·54	2·42	0·27	1·46	0·47	1·69
Jan. 31-Feb. 6	1·21	4·85	0·30	2·48	0·24	0·92	0·17	0·81	0·14	0·66	0·26	1·03	0·22	1·18	0·59	4·46	0·33	1·64	0·28	1·88	0·34	2·80	0·23	3·07	0·35	2·77	0·26	1·72	0·28	1·97
Feb. 7-13	0·97	5·82	0·32	2·80	0·15	1·07	0·46	1·27	0·47	1·13	0·77	1·80	0·43	1·61	0·58	5·04	0·42	2·06	0·66	2·54	0·62	3·42	0·44	3·51	0·54	3·31	0·86	2·58	0·48	2·45
14-20	0·55	6·37	0·64	3·44	0·73	1·80	0·81	2·08	0·56	1·69	0·44	2·24	0·64	2·25	0·15	5·19	0·21	2·27	0·15	2·69	0·27	3·69	0·27	3·78	0·21	3·52	0·52	3·10	0·43	2·88
21-27	0·12	6·49	0·26	3·70	0·32	2·12	0·12	2·20	0·12	1·81	0·16	2·40	0·20	2·45	0·02	5·21	0·05	2·32	0·05	2·74	0·02	3·71	0·09	3·87	0·05	3·57	0·34	3·44	0·13	3·01
Feb. 28-Mar. 5	0·25	6·74	0·14	3·84	0·07	2·19	0·07	2·27	0·05	1·86	0·07	2·47	0·08	2·53	0·08	5·29	0·04	2·36	0·06	2·80	0·08	3·79	0·09	3·96	0·07	3·64	0·05	3·49	0·08	3·09
Mar. 6-12	1·78	8·52	1·09	4·93	0·71	2·90	1·04	3·31	0·88	2·74	1·04	3·51	0·95	3·48	2·11	7·40	1·19	3·55	1·74	4·54	1·59	5·38	1·90	5·86	1·71	5·35	1·23	4·72	1·33	4·42
13-19	0·12	8·64	0·32	5·25	0·78	3·68	0·39	3·70	0·53	3·27	0·81	4·32	0·57	4·05	0·19	7·59	0·40	3·95	0·61	5·15	0·24	5·62	0·56	6·42	0·40	5·75	0·68	5·40	0·48	4·90
20-26	1·11	9·75	0·86	6·11	0·59	4·27	0·92	4·62	0·73	4·00	0·88	5·20	0·83	4·85	0·57	8·16	0·56	4·51	1·01	6·16	0·82	6·44	0·46	6·88	0·68	6·43	1·04	6·44	0·74	5·64
Mar. 27-April 2	0·42	10·17	0·81	6·92	1·36	5·63	0·47	5·09	0·55	4·55	0·63	5·83	0·76	5·61	0·47	8·63	0·50	5·01	0·90	7·06	0·81	7·25	0·75	7·63	0·69	7·12	0·86	7·30	0·73	6·37
April 3-9	0·26	10·43	0·18	7·10	0·14	5·77	0·21	5·30	0·07	4·62	0·06	5·89	0·13	5·74	0·04	8·67	0·04	5·05	0·05	7·11	0·17	7·42	0·17	7·80	0·09	7·21	0·18	7·48	0·11	6·48
10-16	1·21	11·64	0·56	7·66	0·42	6·19	0·30	5·60	0·38	5·00	0·44	6·33	0·42	6·16	1·30	9·97	0·68	5·73	0·56	7·67	0·64	8·06	0·48	8·28	0·73	7·94	0·54	8·02	0·58	7·06
17-23	0·50	12·14	0·79	8·45	1·16	7·35	0·93	6·53	0·94	5·94	1·02	7·35	0·97	7·13	0·43	10·40	0·39	6·12	0·74	8·41	0·58	8·64	0·51	8·79	0·53	8·47	1·08	9·10	0·75	7·81
April 24-30	0·95	13·09	0·18	8·63	0·15	7·50	0·09	6·62	0·10	6·04	0·02	7·37	0·11	7·24	0·95	11·35	0·48	6·60	0·27	8·68	0·54	9·18	0·89	9·68	0·63	9·10	0·07	9·17	0·37	8·18
May 1-7	1·46	14·55	0·45	9·08	0·08	7·58	0·20	6·82	0·38	6·42	0·30	7·67	0·28	7·52	1·54	12·89	0·52	7·12	0·55	9·23	0·70	9·88	0·77	10·45	0·82	9·92	0·33	9·50	0·55	8·73
8-14	0·40	14·95	0·13	9·21	0·01	7·59	0·00	6·82	0·06	6·48	0·00	7·67	0·04	7·56	0·16	13·05	0·09	7·12	0·10	9·33	0·20	10·08	0·40	10·85	0·17	10·09	0·01	9·51	0·11	8·84
15-21	0·70	15·65	0·69	9·90	0·21	7·80	0·49	7·31	0·32	6·80	0·88	8·55	0·52	8·08	1·18	14·23	0·27	7·39	0·70	10·03	0·70	10·78	0·98	11·83	0·77	10·86	0·60	10·11	0·65	9·49
22-28	0·16	15·81	0·06	9·96	0·06	7·86	0·00	7·31	0·00	6·80	0·02	8·57	0·03	8·11	0·00	14·23	0·00	7·39	0·02	10·05	0·04	10·82	0·06	11·89	0·02	10·88	0·13	10·24	0·02	9·51
May 29-June 4	1·46	17·27	1·74	11·70	0·85	8·71	0·22	7·53	0·38	7·18	0·18	8·75	0·68	8·79	2·12	16·35	0·73	8·12	0·42	10·47	1·17	11·99	1·07	12·96	1·10	11·98	0·79	11·03	0·89	10·40
June 5-11	0·91	18·18	0·79	12·49	0·62	9·33	0·19	7·72	0·95	8·13	0·69	9·44	0·65	9·44	1·80	18·15	0·54	8·66	1·40	11·87	2·06	14·05	2·56	15·52	1·67	13·65	1·18	12·21	1·16	11·56
12-18	0·24	18·42	0·20	12·69	0·31	9·64	0·38	8·10	0·35	8·48	0·42	9·86	0·33	9·77	0·52	18·67	0·25	8·91	0·47	12·34	0·70	14·75	0·53	16·05	0·50	14·15	0·20	12·41	0·41	11·97
19-25	0·00	18·42	0·02	12·71	0·21	9·85	0·55	8·65	0·76	9·24	0·76	10·62	0·46	10·23	0·04	18·71	0·16	9·07	0·45	12·79	0·63	14·78	0·16	16·21	0·17	14·32	0·42	12·83	0·32	12·29
June 26-July 2	0·23	18·65	1·29	14·00	0·86	10·71	1·49	10·14	1·32	10·56	1·36	11·98	1·26	11·49	1·28	19·99	2·29	11·36	1·73	14·52	2·28	17·06	1·48	17·69	1·81	16·13	1·08	13·91	1·54	13·83
July 3-9	0·56	19·21	0·50	14·50	6·65	11·36	0·92	11·06	0·56	11·12	1·06	13·04	0·74	12·23	0·46	20·45	0·46	11·82	0·85	15·37	0·31	17·37	0·77	18·46	0·57	16·70	0·66	14·57	0·65	14·48
10-16	0·63	19·84	1·37	15·87	1·64	13·00	0·89	11·95	1·29	12·41	0·53	13·57	1·14	13·37	1·10	21·55	1·24	13·06	0·97	16·34	0·52	17·89	0·23	18·69	0·81	17·51	0·73	15·30	0·98	15·46
17-23	0·75	20·59	1·40	17·27	1·16	14·16	0·46	12·41	0·97	13·38	0·66	14·23	0·93	14·30	1·33	22·88	1·07	14·13	0·99	17·33	1·07	18·96	1·12	19·81	1·12	18·63	1·03	16·33	1·02	16·48
24-30	0·42	21·01	0·63	17·90	1·98	16·14	1·89	14·30	1·41	14·79	1·80	16·03	1·54	15·84	1·22	24·10	1·76	15·89	1·70	19·03	2·10	21·06	1·87	21·68	1·73	20·36	1·58	17·91	1·64	18·12
July 31-Aug. 6	0·66	21·64	0·29	18·19	0·63	16·77	1·20	15·50	0·34	15·13	1·13	17·16	0·72	16·56	0·76	24·86	1·09	16·98	0·54	19·57	0·90	21·96	0·48	22·16	0·76	21·12	0·36	18·27	0·74	18·86
Aug. 7-13	1·10	22·74	0·47	18·66	0·28	17·00	0·01	15·51	0·06	15·19	0·03	17·19	0·16	16·72	0·98	25·84	0·39	17·37	0·15	19·72	0·84	22·80	0·26	22·42	0·52	21·64	0·15	18·37	0·34	19·20
14-20	0·19	22·93	0·29	18·95	0·21	17·21	0·40	15·91	0·41	15·60	0·33	17·52	0·33	17·05	0·49	26·33	0·38	17·75	0·95	20·67	0·55	23·35	1·14	23·56	0·70	22·34	1·03	19·40	0·52	19·72
21-27	1·46	24·39	0·66	19·61	0·48	17·69	0·50	16·41	0·58	16·18	0·23	17·75	0·49	17·54	1·19	27·52	0·95	18·70	0·89	21·56	1·11	24·46	1·03	24·59	1·03	23·37	0·25	19·65	0·76	20·48
Aug. 28-Sept. 3	1·51	25·90	0·56	20·17	0·93	18·62	1·27	17·68	1·31	17·49	1·02	18·77	1·02	18·56	1·05	28·57	1·34	20·04	1·75	23·31	0·87	25·33	0·64	25·23	1·13	24·50	0·71	20·36	1·08	21·56
Sept. 4-10	0·61	26·51	0·17	20·34	0·65	19·27	0·45	18·13	0·38	17·87	0·40	19·17	0·41	18·97	0·40	28·97	0·43	20·47	0·43	23·74	0·40	25·73	0·18	25·41	0·37	24·87	0·22	20·58	0·39	21·95
11-17	0·43	26·94	0·22	20·56	0·08	19·35	0·05	18·18	0·01	17·88	0·02	19·19	0·07	19·04	0·33	29·30	0·08	20·55	0·00	23·74	0·25	25·98	0·20	25·61	0·17	25·04	0·00	20·58	0·12	22·07
18-24	0·14	27·08	0·05	20·61	0·11	19·46	0·20	18·38	0·28	18·16	0·15	19·34	0·16	19·20	0·00	29·30	0·01	20·56	0·02	23·76	0·02	26·00	0·00	25·61	0·01	25·05	0·02	20·60	0·08	22·15
Sept. 25-Oct. 1	0·87	27·95	0·47	21·08	0·43	19·89	0·18	18·56	0·17	18·33	0·56	19·90	0·36	19·56	0·37	29·67	0·42	20·98	0·74	24·50	0·58	26·58	0·48	26·09	0·52	25·57	1·09	21·69	0·44	22·59
Oct. 2-8	1·41	29·36	0·46	21·54	0·42	20·31	0·45	19·01	0·17	18·50	0·62	20·52	0·43	19·99	0·38	30·05	0·68	21·66	0·57	25·07	0·68	27·26	0·32	26·41	0·52	26·09	0·81	22·50	0·47	23·06
9-15	0·84	30·20	0·11	21·65	0·09	20·40	0·15	19·16	0·01	18·51	0·09	20·61	0·09	20·08	0·11	30·16	0·12	21·78	0·06	25·13	0·10	27·36	0·07	26·48	0·09	26·18	0·21	22·71	0·09	23·15
16-22	0·61	30·81	0·14	21·79	0·01	20·41	0·00	19·16	0·00	18·51	0·00	20·61	0·03	20·11	0·07	30·23	0·00	21·78	0·01	25·14	0·15	27·51	0·15	26·63	0·08	26·26	0·17	22·88	0·06	23·21
23-29	2·62	33·43	0·97	22·76	0·15	20·56	0·38	19·54	0·34	18·85	1·02	21·63	0·57	20·68	2·15	32·38	1·09	22·87	1·23	26·37	0·78	28·29	1·58	28·21	1·37	27·63	0·65	23·53	0·97	24·18
Oct. 30-Nov. 5	0·71	34·14	0·97	23·73	1·25	21·81	1·39	20·93	1·69	20·54	1·55	23·18	1·37	22·05	0·87	33·25	1·06	23·93	1·75	28·12	0·89	29·18	1·05	29·26	1·12	28·75	1·82	25·35	1·25	25·43
Nov. 6-12	0·08	34·22	0·71	24·44	0·89	22·70	0·52	21·45	1·53	22·07	1·44	24·62	1·02	23·07	1·30	34·55	1·15	25·08	2·57	30·69	0·88	30·06	1·78	31·04	1·54	30·29	1·64	26·99	1·28	26·71
13-19	2·30	36·52	1·43	25·87	0·61	23·31	0·40	21·85	0·78	22·85	0·39	25·01	0·72	23·79	1·26	36·51	1·35	26·43	1·13	31·82	1·03	31·09	0·57	31·61	1·21	31·50	0·38	27·37	0·96	27·67
20-26	3·62	40·14	1·64	27·51	0·25	23·56	0·53	22·38	0·82	23·67	0·65	25·66	0·78	24·57	3·05	39·56	1·59	28·02	1·25	33·07	1·25	32·34	0·90	32·51	1·61	33·11	0·53	27·90	1·20	28·87
Nov. 27-Dec. 3	1·03	41·17	1·53	29·04	0·85	24·41	0·67	23·05	0·75	24·42	1·06	26·72	0·97	25·54	2·53	42·09	1·06	29·08	1·87	34·94	1·31	33 65	2·05	34·56	1·76	34·87	1·04	28·94	1·36	30·23
Dec. 4-10	0·61	41·78	0·18	29·22	0·11	24·52	0·24	23·29	0·42	24·84	0·32	27·04	0·26	25·80	0·91	43·00	0·39	29·47	0·69	35·63	0·75	34·40	1·53	36·09	0·86	35·73	0·63	29·57	0·56	30·79
11-17	0·42	42·20	0·11	29·33	0·01	24·53	0·02	23·31	0·08	24·92	0·08	27·12	0·06	25·86	0·55	43·55	0·22	29·69	0·31	35·94	0·47	34·87	0·28	36·37	0·37	36·10	0·31	29·88	0·22	31·01
18-24	0·49	42·69	0·67	30·00	0·35	24·88	0·51	23·82	0·49	25·41	0·64	27·76	0·53	26·39	1·49	45·04	0·54	30·23	1·44	37·38	0·99	35·86	2·48	38·85	1·39	37·49	0·67	30·55	0·96	31·97
25-31	1·20	43·89	0·36	30·36	0·67	25·55	0·38	24·20	1·28	26·69	0·72	28·48	0·68	27·07	1·44	46·48	0·86	31·09	1·09	38·47	1·14	37·00	1·04	39·89	1·11	38·60	1·38	31·93	0·99	32·87

TABLE III.—SHOWING THE WEEKLY AND PROGRESSIVE VALUES OF ACCUMULATED HEAT ABOVE 42° F. IN EACH DISTRICT, DURING THE YEAR 1888.

DATE. — LIMITS OF WEEKS.	Principal Wheat-producing Districts.												Principal Grazing, &c. Districts.												Channel Islands.		Means for the British Islands generally.	
	0. Scotland, N.		1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat-producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for Grazing, &c. Districts.					
	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.
	Day-Degrees above 42° Fahrenheit.																											
1888.																												
Jan. 3-9	26	26	30	30	24	24	26	26	28	28	24	24	26	26	25	25	24	24	27	27	34	34	36	36	29	29	36	36	27	27
10-16	5	31	3	33	0	24	0	26	0	28	0	24	1	27	3	28	0	24	0	27	6	40	5	41	3	32	3	39	2	29
17-23	1	32	3	36	1	25	0	26	1	29	2	26	1	28	3	31	0	24	9	36	10	50	25	66	10	42	22	61	6	35
24-30	0	32	0	36	0	25	0	26	0	29	0	26	0	28	1	32	0	24	3	39	8	58	10	76	4	46	9	70	2	37
Jan. 31-Feb. 6	7	39	8	44	8	33	1	27	6	35	6	32	6	34	19	51	5	29	9	48	18	76	21	97	15	61	11	81	10	47
Feb. 7-13	0	39	0	44	3	36	7	34	8	43	10	42	5	39	1	52	1	30	10	58	1	77	8	105	4	65	21	102	5	52
14-20	0	39	0	44	0	36	0	34	0	43	0	42	0	39	0	52	0	30	0	58	0	77	0	105	0	65	0	102	0	52
21-27	0	39	0	44	0	36	0	34	0	43	0	42	0	39	0	52	0	30	0	58	0	77	0	105	0	65	0	102	0	52
Feb. 28-Mar. 5	0	39	0	44	0	36	0	34	0	43	0	42	0	39	0	52	0	30	0	58	4	81	3	108	1	66	0	102	1	53
Mar. 6-12	5	44	10	54	21	57	25	59	19	62	24	66	20	59	16	68	16	46	26	84	22	103	32	140	22	88	32	134	21	74
13-19	0	44	0	54	0	57	0	59	0	62	0	66	0	59	0	68	0	46	1	85	0	103	6	146	1	89	5	139	0	74
20-26	0	44	0	54	0	57	0	59	6	68	3	69	2	61	2	70	4	50	7	92	4	107	11	157	6	95	6	145	4	78
Mar. 27-April 2	0	44	0	54	3	60	12	71	13	81	14	83	8	69	5	75	8	58	14	106	7	114	14	171	10	105	23	168	9	87
[illegible]	9	53	12	66	2	62	3	74	8	89	5	88	6	75	14	89	6	64	8	114	15	129	17	188	12	117	6	174	9	96
10-16	23	76	38	104	37	99	43	117	43	132	38	126	40	115	29	118	31	95	34	148	39	168	52	240	37	154	38	212	39	135
17-23	14	90	15	119	19	118	32	149	29	161	26	152	24	139	25	143	24	119	28	176	25	193	28	268	26	180	39	251	25	160
April 24-30	26	116	35	154	31	149	36	185	36	197	39	191	35	174	31	174	28	147	34	210	31	224	33	301	31	211	36	287	33	193
May 1-7	30	146	44	198	48	197	55	240	52	249	43	234	48	222	34	208	41	188	40	250	41	265	47	348	41	252	50	337	45	238
8-14	27	173	47	245	44	241	62	302	61	310	59	293	55	277	47	255	40	228	53	303	40	305	50	398	46	298	60	397	50	288
15-21	53	226	64	309	75	316	90	392	82	392	86	379	79	356	68	323	82	310	70	373	64	369	71	469	71	369	77	474	75	363
22-28	43	269	52	361	40	356	54	446	69	461	70	449	57	413	73	396	73	383	82	455	83	452	93	564	81	450	81	535	69	432
May 29-June 4	25	294	33	394	55	411	100	546	88	549	100	549	75	488	39	435	62	445	89	544	53	505	87	651	66	516	98	653	71	503
June 5-11	44	338	52	446	67	478	90	636	86	635	93	642	78	566	64	499	76	521	85	629	69	574	85	736	76	592	97	750	77	580
12-18	63	401	76	522	70	548	78	714	72	707	79	721	75	641	81	580	78	599	79	708	76	650	91	827	81	673	90	840	77	657
19-25	68	469	72	594	61	609	104	818	101	808	113	834	90	731	109	689	105	704	112	820	118	768	117	944	112	785	105	945	101	758
June 26-July 2	75	544	78	672	75	684	104	922	102	910	108	942	93	824	104	793	102	806	103	923	99	867	111	1055	104	889	112	1057	99	857
July 3-9	49	593	62	734	77	761	101	1023	92	1002	106	1048	88	912	76	869	88	894	104	1027	86	953	99	1154	90	979	114	1171	89	946
10-16	62	655	80	814	69	830	88	1111	83	1085	95	1143	83	995	81	950	83	977	94	1121	83	1036	94	1248	87	1066	102	1273	85	1031
17-23	91	746	102	916	113	943	127	1238	125	1210	127	1270	119	1114	113	1063	119	1096	117	1238	111	1147	115	1363	115	1181	117	1390	117	1148
24-30	65	811	75	991	90	1033	113	1351	99	1309	120	1390	99	1213	93	1156	98	1194	106	1344	90	1237	101	1464	98	1279	120	1510	90	1247
July 31-Aug. 6	59	870	71	1062	78	1111	92	1443	89	1398	104	1494	87	1300	71	1227	84	1278	97	1441	82	1319	96	1560	86	1365	111	1621	87	1334
7-13	79	949	101	1163	124	1235	157	1600	146	1544	148	1642	135	1435	106	1333	125	1403	128	1569	111	1430	126	1686	119	1484	139	1760	127	1461
14-20	50	999	65	1228	71	1306	78	1678	78	1622	95	1737	77	1512	77	1410	81	1484	86	1655	90	1520	94	1780	86	1570	113	1873	81	1542
21-27	98	1097	108	1336	116	1422	125	1803	118	1740	127	1864	119	1631	112	1522	116	1600	120	1775	113	1633	121	1901	117	1687	133	2006	118	1660
Aug. 28-Sept. 3	71	1168	81	1417	90	1512	95	1898	86	1826	104	1968	91	1722	82	1604	90	1690	91	1866	85	1718	95	1996	88	1775	118	2124	90	1750
Sept. 4-10	57	1225	64	1481	79	1591	95	1993	83	1909	97	2065	84	1806	72	1676	82	1772	83	1949	78	1796	83	2079	80	1855	106	2230	82	1832
11-17	76	1301	77	1558	81	1672	96	2089	85	1994	102	2167	88	1894	76	1752	92	1864	92	2041	88	1884	87	2166	87	1942	114	2344	87	1919
18-24	78	1379	76	1634	64	1736	104	2193	80	2074	111	2278	87	1981	71	1823	82	1946	95	2136	76	1960	73	2239	79	2021	124	2468	83	2002
Sept. 25-Oct. 1	31	1410	31	1665	43	1779	64	2257	54	2128	85	2363	55	2036	38	1861	50	1996	84	2220	57	2017	76	2315	61	2082	99	2567	58	2060
Oct. 2-8	15	1425	20	1685	20	1799	23	2280	23	2151	39	2402	25	2061	32	1893	29	2025	39	2259	32	2049	37	2352	34	2116	50	2617	30	2090
9-15	29	1454	42	1727	40	1839	42	2322	46	2197	47	2449	44	2105	38	1931	39	2064	48	2307	41	2090	46	2398	43	2159	62	2679	43	2133
16-22	36	1490	42	1769	34	1873	47	2369	47	2244	50	2499	44	2149	42	1973	45	2109	53	2360	52	2142	65	2463	51	2210	72	2751	47	2180
23-29	64	1554	77	1846	76	1949	67	2436	68	2312	78	2577	73	2222	74	2047	76	2185	86	2446	78	2220	88	2551	80	2290	97	2848	77	2257
Oct. 30-Nov. 5	20	1574	23	1869	32	1981	39	2475	33	2345	50	2627	35	2257	29	2076	42	2227	43	2489	36	2256	43	2594	39	2329	69	2917	37	2294
Nov. 6-12	19	1593	13	1882	13	1994	8	2483	8	2353	22	2649	13	2270	21	2097	10	2237	33	2522	25	2281	41	2635	26	2355	65	2982	20	2314
13-19	28	1621	33	1915	40	2034	53	2536	59	2412	69	2718	51	2321	41	2138	51	2288	68	2590	45	2326	67	2702	54	2409	83	3065	52	2366
20-26	12	1633	30	1945	34	2068	43	2579	40	2452	53	2771	40	2361	29	2167	42	2330	50	2640	31	2357	45	2747	39	2448	71	3136	40	2406
Nov. 27-Dec. 3	4	1637	8	1953	22	2090	25	2604	26	2478	32	2803	22	2383	18	2185	24	2354	33	2673	15	2372	30	2777	24	2472	58	3194	24	2430
Dec. 4-10	23	1660	25	1978	28	2118	30	2634	31	2509	36	2839	30	2413	31	2216	34	2388	41	2714	31	2403	34	2811	34	2506	55	3249	32	2462
11-17	19	1679	4	1982	0	2118	0	2634	0	2509	0	2839	1	2414	7	2223	2	2390	10	2724	11	2414	26	2837	11	2517	23	3272	6	2468
18-24	25	1704	12	1994	8	2126	13	2647	24	2533	28	2867	17	2431	25	2248	25	2415	33	2757	23	2437	32	2869	28	2545	43	3315	22	2490
25-31	0	1704	0	1994	0	2126	5	2652	1	2534	9	2876	3	2434	1	2249	1	2416	10	2767	2	2439	9	2878	5	2550	29	3344	4	2494

TABLE IV.—SHOWING THE WEEKLY AND PROGRESSIVE VALUES OF ACCUMULATED HEAT BELOW 42° F. IN EACH DISTRICT, DURING THE YEAR 1888.

DATE. — LIMITS OF WEEKS	Principal Wheat-producing Districts.												Principal Grazing, &c. Districts.												Channel Islands.		Means for the British Islands generally.	
	0. Scotland, N.		1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat-producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for Grazing, &c. Districts.					
	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.
	Day-Degrees below 42° Fahrenheit.																											
1888.																												
Jan. 3-9	8	8	10	10	13	13	16	16	14	14	10	10	13	13	3	3	6	6	4	4	6	6	2	2	4	4	0	0	8	8
10-16	22	30	30	40	31	44	47	63	63	77	50	60	44	57	21	24	33	39	26	40	14	20	11	13	23	27	15	15	34	42
17-23	40	70	43	83	32	76	33	96	34	111	33	93	35	92	27	51	31	70	23	63	21	41	8	21	22	49	5	20	29	71
24-30	46	116	31	114	33	109	41	137	38	149	38	131	36	128	34	85	26	96	35	98	29	70	25	46	30	79	18	38	33	104
Jan. 31-Feb. 6	30	146	29	143	26	135	44	181	37	186	43	174	36	164	11	96	18	114	30	128	8	78	11	57	15	94	19	57	26	130
Feb. 7-13	56	202	42	185	29	164	27	208	26	212	23	197	29	193	34	130	23	137	18	146	26	104	19	76	24	118	0	57	27	157
14-20	83	285	80	265	60	224	62	270	70	282	61	258	67	260	68	198	64	201	60	206	45	149	44	120	56	174	34	91	61	218
21-27	54	339	60	325	60	284	87	357	81	363	82	340	74	334	50	248	57	258	73	279	48	197	50	170	56	230	50	141	65	283
Feb. 28-Mar. 5	52	391	53	378	49	333	67	424	63	426	66	406	60	394	44	292	50	308	54	333	39	236	38	208	45	275	36	177	53	336
Mar. 6-12	27	418	25	403	11	344	10	434	9	435	10	416	13	407	7	299	8	316	6	339	6	242	4	212	6	281	0	177	9	345
13-19	67	485	81	484	69	413	60	494	57	492	41	457	61	468	67	366	64	380	37	376	48	298	36	248	50	331	17	194	56	401
20-26	50	535	47	531	37	450	43	537	43	535	35	492	41	509	40	406	36	416	36	412	42	332	39	287	30	370	23	217	40	441
Mar. 27-April 2	45	580	41	572	32	482	31	568	35	570	25	517	33	542	32	438	31	447	29	441	31	363	32	319	31	401	8	225	32	473
April 3-9	37	617	41	613	35	517	44	612	44	614	39	556	41	583	35	473	33	480	36	477	30	393	32	351	33	434	22	247	37	510
10-16	14	631	15	628	10	527	13	625	9	623	9	565	11	594	4	477	4	484	1	478	0	393	0	351	2	436	0	247	7	517
17-23	20	651	20	648	8	535	5	630	4	627	0	565	8	602	8	485	4	488	2	480	7	400	0	351	4	440	0	247	6	523
April 24-30	16	667	14	662	10	545	11	641	10	637	7	572	10	612	9	494	8	496	5	485	7	407	1	352	6	446	0	247	8	531
May 1-7	8	675	6	668	0	545	3	644	0	637	0	572	2	614	0	494	0	496	0	485	1	408	0	352	0	446	0	247	1	532
8-14	14	689	13	681	10	555	15	659	13	650	5	577	11	625	11	505	4	500	2	487	9	417	0	352	5	451	0	247	8	540
15-21	0	689	0	681	0	555	0	659	0	650	0	577	0	625	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	540
22-28	8	697	8	689	0	555	[illegible]	[illegible]	4	654	0	577	3	628	6	505	0	500	0	487	0	417	0	352	0	451	0	247	2	542
May 29-June 4	13	710	11	700	0	555	0	661	0	654	0	577	2	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	1	543
June 5-11	1	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
12-18	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
19-25	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
June 26-July 2	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
July 3-9	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
10-16	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
17-23	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
24-30	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
July 31-Aug. 6	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
Aug. 7-13	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
14-20	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
21-27	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
Aug. 28-Sept. 3	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
Sept. 4-10	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
11-17	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
18-24	0	711	0	700	0	555	0	661	0	654	0	577	0	630	0	505	0	500	0	487	0	417	0	352	0	451	0	247	0	543
Sept. 25-Oct. 1	13	724	8	708	0	555	0	661	0	654	0	577	2	632	0	505	0	500	0	487	0	417	0	352	0	451	0	247	1	544
Oct. 2-8	27	751	19	727	30	585	38	699	40	694	24	601	30	662	15	520	15	515	13	500	9	426	12	364	13	464	0	247	22	566
9-15	4	755	3	730	1	586	10	709	17	711	13	614	9	671	0	520	0	515	6	506	1	427	4	368	2	466	0	247	6	572
16-22	0	755	0	730	3	589	21	730	20	731	8	622	10	681	0	520	3	518	0	506	0	427	0	368	1	467	0	247	5	577
23-29	0	755	0	730	0	589	0	730	0	731	0	622	0	681	0	520	0	518	0	506	0	427	0	368	0	467	0	247	0	577
Oct. 30-Nov. 5	7	762	4	734	0	589	0	730	0	731	0	622	1	682	0	520	0	518	0	506	0	427	0	368	0	467	0	247	1	578
Nov. 6-12	8	770	8	742	8	597	19	749	21	752	7	629	12	694	7	527	17	535	1	507	2	429	0	368	5	472	0	247	8	586
13-19	2	772	4	746	0	597	0	749	0	752	0	629	1	695	0	527	0	535	0	507	0	429	0	368	0	472	0	247	1	587
20-26	25	797	14	760	0	597	0	749	0	752	0	629	3	698	3	530	0	535	0	507	0	429	0	368	1	473	0	247	2	589
Nov. 27-Dec. 3	36	833	38	798	9	606	9	758	12	764	2	631	14	712	10	540	8	543	4	511	15	444	13	381	10	483	0	247	12	601
Dec. 4-10	4	837	3	801	2	608	7	765	5	769	0	631	3	715	0	540	0	543	0	511	6	450	1	382	1	484	0	247	2	603
11-17	11	848	32	833	42	650	58	823	60	829	39	670	46	761	18	558	30	573	29	540	22	472	14	396	23	507	1	248	34	637
18-24	8	856	24	857	21	671	24	847	14	843	4	674	18	779	6	564	8	581	1	541	9	481	8	404	6	513	0	248	12	649
25-31	47	903	55	912	41	712	40	887	41	884	27	701	41	820	30	603	32	613	32	573	37	518	39	443	36	549	0	248	39	688

TABLE V.—SHOWING THE WEEKLY AND PROGRESSIVE NUMBERS OF HOURS OF BRIGHT SUNSHINE IN EACH DISTRICT, REGISTERED DURING THE YEAR 1888.

DATE. — LIMITS OF WEEKS.	0. Scotland, N.		Principal Wheat-producing Districts. 1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat-producing Districts.		Principal Grazing, &c. Districts. 6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for Grazing, &c. Districts.		Channel Islands.		Means for the British Islands generally.	
	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.
	Numbers of Hours of Bright Sunshine.																													
1888.																														
Jan. 3-9	2	2	7	7	9	9	16	16	11	11	8	8	10	10	6	6	6	6	7	7	11	11	16	16	9	9	11	11	10	10
10-16	7	9	10	17	3	12	8	24	6	17	4	12	6	16	1	7	2	8	1	8	2	13	10	26	4	13	10	21	5	15
17-23	8	17	16	33	3	15	10	34	9	26	13	25	10	26	4	11	8	16	14	22	5	18	10	36	8	21	28	49	9	24
24-30	8	25	15	48	16	31	21	55	17	43	20	45	18	44	20	31	17	33	24	46	24	42	20	56	21	42	26	75	19	43
Jan. 31-Feb. 6	4	29	7	55	7	38	11	66	13	56	11	56	10	54	10	41	6	39	16	62	6	48	6	62	9	51	11	86	9	52
7-13	16	45	28	83	33	71	18	84	20	76	10	66	22	76	24	65	22	61	14	76	12	60	17	79	18	69	9	95	20	72
14-20	20	65	23	106	17	88	9	93	15	91	12	78	15	91	34	99	27	88	33	109	31	91	29	108	31	100	13	108	23	95
21-27	18	83	5	111	2	90	7	100	4	95	13	91	6	97	11	110	12	100	17	126	11	102	16	124	13	113	6	114	10	105
Feb. 28-Mar. 5	22	105	16	127	27	117	25	125	21	116	20	111	22	119	28	138	30	130	27	153	16	118	23	147	25	138	25	139	24	129
Mar. 6-12	13	118	8	135	18	135	13	138	12	128	12	123	13	132	11	149	7	137	20	173	5	123	18	165	12	150	27	166	12	141
13-19	37	155	18	153	8	143	9	147	13	141	12	135	12	144	26	175	19	156	35	208	21	144	28	193	26	176	14	180	19	160
20-26	24	179	20	173	31	174	13	160	17	158	12	147	18	162	33	208	33	189	21	229	24	168	33	226	29	205	18	198	23	183
Mar. 27-April 2	28	207	14	187	22	196	17	177	18	176	15	162	17	179	34	242	28	217	25	254	30	198	34	260	30	235	41	239	24	207
April 3-9	23	230	36	223	28	224	39	216	29	205	33	195	33	212	39	281	33	250	44	298	23	221	38	208	[illegible]	271	50	289	35	242
10-16	17	247	37	260	34	258	35	251	22	227	22	217	30	242	25	306	20	270	17	315	19	240	24	322	21	292	19	308	25	267
17-23	28	275	15	275	9	267	14	265	15	242	16	233	14	256	19	325	17	287	28	343	19	259	21	343	21	313	30	338	17	284
April 24-30	37	312	41	316	12	279	23	288	18	260	29	262	24	280	33	358	24	311	30	373	25	284	25	368	27	340	43	381	26	310
May 1-7	30	342	36	352	40	319	36	324	40	300	38	300	38	318	29	387	27	338	38	411	33	317	43	411	34	374	55	436	36	346
8-14	27	369	65	417	67	386	66	390	58	358	62	362	64	382	69	456	58	396	62	473	58	375	52	463	60	434	81	517	62	408
15-21	35	404	41	458	37	423	48	438	40	398	41	403	41	423	28	484	35	431	40	513	34	409	37	500	35	469	51	568	38	446
22-28	65	469	54	512	47	470	47	485	59	457	58	461	53	476	67	551	64	495	79	592	73	482	79	579	72	541	76	644	63	509
May 29-June 4	35	504	29	541	33	503	50	535	38	495	55	516	41	517	25	576	23	518	41	633	24	506	25	604	27	568	56	700	34	543
June 5-11	40	544	39	580	31	534	34	569	29	524	29	545	32	549	26	602	27	545	22	655	13	519	15	619	21	589	26	726	27	570
12-18	71	615	57	637	31	565	28	597	37	561	34	579	37	586	61	663	52	597	60	715	62	581	65	684	60	649	64	790	49	619
19-25	63	678	71	708	50	615	44	641	28	589	30	609	45	631	74	737	54	651	33	748	77	658	56	740	59	708	36	826	52	671
June 26-July 2	45	723	39	747	20	635	23	664	30	619	26	635	28	659	46	783	31	682	33	781	27	685	30	770	33	741	39	865	30	701
July 3-9	43	766	18	765	20	655	26	690	21	640	22	657	21	680	19	802	20	702	37	818	22	707	32	802	26	767	40	905	23	724
10-16	32	798	20	785	9	664	15	705	18	658	25	682	17	697	25	827	17	719	35	853	13	720	26	828	23	790	57	962	20	744
17-23	29	827	39	824	39	703	31	736	25	683	20	702	31	728	26	853	31	750	29	882	30	750	33	861	30	820	17	979	31	775
24-30	19	846	21	845	19	722	30	766	23	706	25	727	24	752	18	871	16	766	28	910	24	774	34	895	24	844	27	1006	24	799
July 31-Aug. 6	34	880	45	890	25	747	30	796	37	743	32	759	34	786	50	921	46	812	44	954	37	811	40	935	44	888	55	1061	39	838
7-13	5	885	12	902	25	772	42	838	42	785	46	805	38	819	16	937	29	841	28	982	19	830	27	962	24	912	58	1119	29	867
14-20	56	941	39	941	28	800	23	861	30	815	34	839	31	850	45	982	40	881	43	1025	38	868	41	1003	41	953	35	1154	36	903
21-27	22	963	24	965	25	825	32	893	30	845	33	872	29	879	26	1008	26	907	40	1065	34	902	46	1049	34	987	45	1199	31	934
Aug. 28-Sept. 3	18	981	29	994	25	850	33	926	31	876	34	906	30	909	29	1037	26	933	36	1101	20	922	26	1075	27	1014	43	1242	29	963
Sept. 4-10	20	1001	30	1024	23	873	22	948	30	906	33	939	27	936	31	1068	28	961	40	1141	20	942	40	1115	32	1046	51	1293	29	992
11-17	23	1024	41	1065	42	915	43	991	41	947	46	985	43	979	36	1104	36	997	51	1192	33	975	43	1158	40	1086	64	1357	42	1034
18-24	15	1039	47	1112	28	943	40	1031	24	971	43	1028	36	1015	30	1134	40	1037	41	1233	20	995	32	1190	33	1119	57	1414	34	1068
Sept. 25-Oct. 1	21	1060	9	1121	13	956	32	1063	24	995	25	1053	20	1035	20	1154	28	1065	20	1253	16	1011	16	1206	20	1139	18	1432	20	1088
Oct. 2-8	18	1078	20	1141	32	988	32	1095	28	1023	29	1082	28	1063	29	1183	25	1090	32	1285	22	1033	23	1229	26	1165	29	1461	27	1115
9-15	8	1086	15	1156	27	1015	28	1123	34	1057	39	1121	29	1092	17	1200	21	1111	38	1323	22	1055	30	1259	26	1191	42	1503	28	1143
16-22	9	1095	9	1165	14	1029	35	1158	28	1085	30	1151	23	1115	13	1213	24	1135	29	1352	22	1077	21	1280	22	1213	46	1549	22	1165
Oct. 23-29	2	1097	13	1178	9	1038	15	1173	13	1098	16	1167	13	1128	5	1218	5	1140	8	1360	7	1084	7	1287	6	1219	33	1582	10	1175
Oct. 30-Nov. 5	18	1115	5	1183	5	1043	6	1179	6	1104	8	1175	6	1134	8	1226	6	1146	11	1371	16	1100	19	1306	12	1231	10	1592	9	1184
6-12	20	1135	3	1186	15	1058	13	1192	3	1107	5	1180	8	1142	9	1235	10	1156	10	1381	9	1109	7	1313	9	1240	5	1597	9	1193
13-19	5	1140	8	1194	8	1066	9	1201	11	1118	8	1188	9	1151	7	1242	2	1158	8	1389	12	1121	13	1326	8	1248	16	1613	8	1201
20-26	3	1143	10	1204	11	1077	10	1211	10	1128	7	1195	9	1160	5	1247	5	1163	9	1398	8	1129	7	1333	7	1255	12	1625	8	1209
Nov. 27-Dec. 3	7	1150	3	1207	7	1084	10	1221	8	1136	7	1202	7	1167	4	1251	5	1168	12	1410	3	1132	3	1336	5	1260	20	1645	6	1215
Dec. 4-10	6	1156	6	1213	13	1097	15	1236	15	1151	14	1216	13	1180	7	1258	12	1180	13	1423	15	1147	16	1352	13	1273	16	1661	13	1228
11-17	1	1157	7	1220	14	1111	15	1251	7	1158	12	1228	11	1191	4	1262	4	1184	14	1437	8	1155	13	1365	8	1281	27	1688	9	1237
18-24	4	1161	3	1223	3	1114	6	1257	4	1162	7	1235	5	1196	2	1264	4	1188	4	1441	5	1160	8	1373	5	1286	11	1699	5	1242
Dec. 25-31	4	1165	10	1233	7	1121	10	1267	11	1173	10	1245	9	1205	13	1277	10	1198	18	1459	13	1173	14	1387	14	1300	11	1710	12	1254

TABLE VI.—SHOWING THE WEEKLY AND PROGRESSIVE VALUES FOR THE PERCENTAGE OF THE POSSIBLE DURATION OF BRIGHT SUNSHINE IN EACH DISTRICT, WHICH WAS ACTUALLY RECORDED DURING THE YEAR 1888.

DATE.—LIMITS OF WEEKS.	0. Scotland, N.		Principal Wheat-producing Districts.												Principal Grazing, &c. Districts.																Channel Islands.		Means for the British Islands generally.	
			1. Scotland, E.		2. England, N.E.		3. England, E.		4. Midland Counties.		5. England, S.		Means for Wheat Producing Districts.		6. Scotland, W.		7. England, N.W.		8. England, S.W.		9. Ireland, N.		10. Ireland, S.		Means for Grazing, &c. Districts.								
	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.	Weekly.	From Jan. 3.
	Percentages of Possible Duration.																															
1888.																																
Jan. 3-9	5	5	15	15	17	17	29	29	21	21	14	14	19	19	11	11	12	12	12	12	21	21	29	29	17	17	19	19	18	18		
10-16	14	10	19	17	6	11	15	22	11	16	6	11	12	15	1	7	4	8	1	7	3	12	17	24	5	12	17	18	9	14		
17-23	16	12	31	22	7	9	18	20	16	16	22	15	19	16	7	7	14	10	23	13	8	11	19	22	14	13	46	28	16	15		
24-30	15	13	28	23	28	14	34	24	29	19	33	19	30	20	35	14	29	15	39	20	40	19	34	25	36	19	41	31	33	20		
Jan. 31-Feb. 6	7	11	12	21	12	14	17	23	21	19	17	19	16	19	16	15	10	14	24	21	9	17	9	22	14	18	17	28	15	19		
Feb. 7-13	26	14	45	25	52	21	28	24	31	21	15	18	34	22	37	19	34	18	21	21	18	17	25	22	27	19	13	25	30	21		
14-20	30	17	34	27	25	21	12	22	21	22	18	18	22	22	50	24	40	21	47	25	46	22	42	26	45	24	18	24	34	23		
21-27	26	18	7	24	3	19	9	21	6	19	18	18	8	20	16	23	17	21	24	25	15	21	22	25	19	23	8	22	14	22		
Feb. 28-Mar. 5	30	20	22	24	36	21	33	22	28	20	27	19	29	21	37	25	40	23	35	26	21	21	30	26	33	24	33	23	31	23		
Mar. 6-12	17		11	22	24	21	16	21	15	20	15	19	16	21	14	24	8	21	25	26	7	19	23	25	15	23	34	25	15	22		
13-19	46	23	22	22	10	20	11	20	16	19	14	18	15	20	31	25	23	22	42	28	26	20	34	26	31	24	17	24	23	22		
20-26	28	23	24	22	36	22	16	20	21	19	14	18	22	20	38	26	39	23	24	28	27	21	38	28	33	25	21	24	28	22		
Mar. 27-April 2	31	24	15	21	25	22	19	19	20	19	17	18	19	20	38	27	31	24	28	28	34	22	39	29	34	26	46	26	27	23		
April 3-9	25	24	39	23	31	23	43	22	31	21	36	19	36	22	42	29	36	25	48	30	25	22	41	30	38	27	54	28	37	25		
10-16	17	23	38	24	35	24	37	23	23	21	23	20	31	22	26	28	21	25	19	29	20	22	26	29	22	27	20	28	27	25		
17-23	27	24	15	24	9	23	14	22	15	20	16	19	14	22	19	28	17	24	29	29	19	22	21	29	21	27	31	28	18	25		
April 24-30	35	25	39	25	12	22	23	22	18	20	29	20	24	22	32	28	23	24	30	29	24	22	25	28	27	26	43	29	26	24		
May 1-7	28	25	33	26	38	25	34	23	38	21	36	21	36	23	27	28	26	24	37	29	31	23	41	29	32	27	54	31	34	25		
8-14	24	25	58	28	61	26	62	26	54	24	59	24	59	26	63	30	53	26	59	31	53	25	48	31	55	29	78	34	57	28		
15-21	30	25	36	29	33	26	44	27	36	25	38	25	37	26	25	30	32	27	37	32	30	25	34	31	32	29	48	35	35	28		
22-28	55	27	47	30	41	27	42	28	53	26	53	27	47	28	58	32	57	29	72	34	64	28	70	34	64	31	70	37	56	30		
May 29-June 4	29	27	25	29	28	27	44	29	34	27	49	28	36	28	22	31	20	28	37	34	21	27	22	33	24	31	51	38	30	30		
June 5-11	33	28	32	30	26	27	30	29	25	27	26	28	28	28	22	31	23	28	20	34	11	26	13	32	18	30	23	37	23	29		
12-18	57	29	47	31	26	27	24	29	32	27	30	28	32	28	51	32	44	29	52	35	53	28	56	33	51	31	57	38	42	30		
19-25	50	31	57	32	42	28	38	29	24	27	27	28	37	29	62	34	46	30	29	34	66	30	48	35	50	33	32	38	44	31		
June 26-July 2	36	31	32	32	17	27	20	29	26	27	23	28	24	29	38	34	27	30	29	34	23	30	26	33	29	32	35	38	27	31		
July 3-9	35	31	15	31	17	27	23	29	18	26	20	27	19	28	16	33	17	29	33	34	18	29	28	33	22	32	36	38	20	30		
10-16	26	31	17	31	8	26	13	28	16	26	22	27	15	28	22	32	15	28	32	34	12	28	23	33	21	31	52	38	18	29		
17-23	25	31	34	31	34	26	27	28	23	26	18	27	27	28	23	32	27	28	26	34	27	28	29	33	26	31	16	37	26	30		
24-30	16	30	18	30	17	26	28	28	22	26	23	27	22	27	17	31	15	28	26	33	22	28	32	32	22	30	25	37	22	29		
July 31-Aug. 6	30	30	40	31	23	26	29	28	35	26	31	27	32	28	46	32	42	28	41	34	34	28	37	33	40	31	53	37	36	30		
Aug. 7-13	5	29	11	30	24	26	41	28	40	26	45	27	32	27	15	31	28	28	28	33	18	28	26	33	23	31	57	38	28	29		
14-20	53	30	38	30	27	26	23	28	30	27	34	28	30	28	44	32	39	29	43	34	37	28	41	33	41	31	35	38	35	30		
21-27	22	30	24	30	25	26	33	28	31	27	34	28	30	28	26	32	26	29	41	34	34	28	47	33	35	31	47	38	33	30		
Aug. 28-Sept. 3	19	29	30	30	26	26	35	28	33	27	36	28	31	28	30	31	27	28	38	34	21	28	27	33	29	31	46	39	30	30		
Sept. 4-10	22	29	32	30	25	26	24	28	33	27	36	28	30	28	34	32	30	29	45	34	21	28	44	33	35	31	56	39	33	29		
11-17	26	29	47	30	48	26	49	29	46	28	53	29	49	28	40	32	41	29	58	35	38	28	48	34	45	32	73	40	47	30		
18-24	18	29	55	31	33	27	47	29	28	28	51	29	43	29	35	32	46	29	49	35	24	28	37	34	38	32	67	41	40	31		
Sept. 25-Oct. 1	26	29	11	31	15	26	40	30	30	28	31	29	25	29	24	32	34	29	24	35	19	28	20	33	24	31	22	40	25	30		
Oct. 2-8	23	29	27	31	41	27	41	30	37	28	37	30	37	29	38	32	32	29	41	35	28	28	30	33	34	31	37	40	36	30		
9-15	10	28	20	30	37	27	38	30	45	28	52	30	38	29	23	32	28	29	51	35	29	28	40	34	34	32	55	40	36	31		
16-22	13	28	13	30	20	27	49	30	40	28	42	30	33	29	19	31	33	29	41	36	31	28	29	33	31	31	63	41	32	30		
23-29	3	28	21	30	13	26	22	30	18	28	23	30	19	29	7	31	7	29	12	35	10	28	10	33	9	31	47	41	14	30		
Oct. 30-Nov. 5	29	28	7	30	8	26	10	30	10	28	13	30	10	29	12	31	10	29	17	35	25	28	28	33	18	31	15	40	14	30		
Nov. 6-12	35	28	5	29	24	26	20	30	5	28	8	29	12	28	14	30	16	29	15	34	15	27	12	33	15	31	8	40	14	30		
13-19	9	28	13	29	15	26	16	29	18	27	13	29	15	28	11	30	4	28	13	34	21	27	22	32	14	30	25	40	15	29		
20-26	5	27	19	29	21	26	17	29	17	27	12	29	17	28	8	30	8	28	16	34	14	27	12	32	12	30	20	39	15	29		
Nov. 27-Dec. 3	14	27	6	29	13	26	19	29	15	27	12	29	13	28	7	30	9	28	20	34	5	27	6	32	9	30	33	39	11	29		
Dec. 4-10	14	27	13	28	26	26	28	29	28	27	26	29	24	28	15	29	22	28	24	34	28	27	30	32	24	30	28	39	24	29		
11-17	2	27	15	28	28	26	28	29	12	27	22	29	21	28	6	29	7	27	25	33	15	27	25	32	18	30	47	39	20	29		
18-24	9	27	7	28	5	26	13	29	7	27	12	28	9	28	5	29	3	27	6	33	11	27	15	32	8	30	20	39	9	29		
25-31	7	26	21	28	14	25	18	29	21	27	17	28	18	27	25	29	18	27	32	33	25	27	27	31	25	29	19	39	22	28		

WEEKLY WEATHER REPORT, 1888.

VOL. V. APPENDIX III.] [*Price* 1*s*.
Second Series.

TABLE I.—SHOWING FOR EACH DISTRICT, DURING THE ELEVEN YEARS 1878–88, THE MEAN AGGREGATE NUMBERS OF RAINY DAYS FROM THE BEGINNING OF THE YEAR TO THE END OF EACH WEEK IN THE YEAR.

Numbers of Weeks.	Principal Wheat-producing Districts.						Principal Grazing, &c. Districts.						Channel Islands.	Means for the British Islands generally.
	0. Scotland, N.	1. Scotland, E.	2. England, N.E.	3. England, E.	4. Midland Counties.	5. England, S.	Means for Wheat-producing Districts.	6. Scotland, W.	7. England, N.W.	8. England, S.W.	9. Ireland, N.	10. Ireland, S.	Means for Grazing, &c. Districts.	
	Numbers of Days with Rain.													
1	5	4	3	4	4	4	4	5	4	5	5	5	5	5
2	10	7	7	8	7	7	7	8	7	8	9	8	9	8
3	15	10	10	10	10	9	10	12	11	12	13	12	13	11
4	20	13	14	14	13	13	13	16	14	16	17	16	17	15
5	25	17	17	18	17	17	17	21	18	20	22	20	22	19
6	30	21	21	22	21	21	21	26	23	24	26	25	26	23
7	35	25	25	26	25	25	25	31	27	29	31	30	32	28
8	40	29	28	29	29	29	29	34	31	32	35	34	36	31
9	44	32	32	33	32	32	32	38	35	36	40	38	41	35
10	50	37	36	36	35	35	36	43	39	40	45	42	45	39
11	54	40	39	39	37	37	38	46	41	42	48	45	48	41
12	59	44	43	43	40	40	42	50	45	46	52	49	52	45
13	63	48	46	46	43	43	45	53	48	50	57	53	57	49
14	66	50	49	48	47	46	48	56	51	54	61	56	60	52
15	70	54	53	52	50	49	52	60	54	57	64	60	64	56
16	74	58	57	57	54	53	56	63	58	61	68	64	69	60
17	78	62	61	61	58	57	60	67	62	65	72	68	73	64
18	82	65	64	65	61	60	63	71	65	68	76	71	76	67
19	86	68	68	68	64	63	66	74	68	71	79	74	79	70
20	91	72	71	71	67	66	69	78	72	74	84	79	77	83	73
21	95	76	74	74	71	71	73	81	75	78	87	82	81	86	77
22	99	79	77	77	74	72	76	85	78	82	91	86	84	90	80
23	103	82	81	81	78	76	80	89	81	86	95	90	88	95	84
24	107	86	84	84	82	79	83	92	85	89	99	94	92	98	88
25	119	88	87	88	85	83	86	95	88	93	102	97	95	102	91
26	113	91	89	90	88	85	89	99	91	95	107	101	99	105	94
27	117	96	92	93	92	88	92	103	95	99	111	105	103	109	98
28	122	100	96	97	96	92	96	108	99	103	116	109	107	113	102
29	126	104	100	101	100	95	100	112	103	108	121	114	112	117	106
30	130	108	104	105	103	99	104	116	107	112	126	118	116	121	110
31	134	111	107	108	106	101	107	119	110	115	130	121	119	124	113
32	139	115	110	111	109	104	110	123	114	118	134	125	123	128	117
33	142	119	114	114	112	107	113	127	117	122	139	129	127	132	120
34	146	123	117	118	115	110	117	130	121	125	143	133	130	136	124
35	151	127	122	122	119	114	121	135	125	130	148	137	135	141	128
36	155	131	125	126	123	118	125	139	129	134	152	141	139	145	132
37	159	134	128	129	126	121	128	143	132	137	156	145	143	148	136
38	163	138	132	133	129	125	131	146	135	140	160	148	146	152	139
39	168	142	136	137	133	128	135	151	140	144	165	153	151	158	143
40	173	146	139	142	136	132	139	155	144	149	169	156	155	162	147
41	178	149	143	144	140	135	142	159	148	153	173	160	159	167	151
42	183	153	147	148	144	138	146	162	151	156	177	164	162	171	154
43	188	157	151	152	148	143	150	166	155	161	182	168	166	177	158
44	194	162	156	157	153	147	155	170	160	167	187	173	171	182	163
45	199	166	159	161	156	151	159	175	164	172	191	177	176	187	168
46	204	170	164	166	161	155	163	179	168	176	196	182	180	192	172
47	209	175	168	170	165	159	167	183	173	181	201	186	185	198	176
48	215	179	173	175	169	163	172	188	177	186	206	191	190	203	181
49	220	183	177	179	173	167	176	192	181	190	211	196	194	208	185
50	226	187	180	183	176	171	179	196	186	194	216	200	198	213	189
51	231	191	184	187	180	175	183	200	190	199	221	204	203	219	193
52	237	195	188	191	183	178	187	205	194	203	226	208	207	223	197

A 57061. 350.—1/89. Wt. 37. E. & S.

TABLE II.—SHOWING FOR EACH DISTRICT, DURING THE ELEVEN YEARS 1878–88, THE MEAN AGGREGATE AMOUNTS OF RAINFALL FROM THE BEGINNING OF THE YEAR TO THE END OF EACH WEEK IN THE YEAR.

Numbers of Weeks.	Principal Wheat-producing Districts.							Principal Grazing, &c. Districts.						Channel Islands.	Means for the British Islands generally.
	0. Scotland, N.	1. Scotland, E.	2. England, N.E.	3. England, E.	4. Midland Counties.	5. England, S.	Means for Wheat-producing Districts.	6. Scotland, W.	7. England, N.W.	8. England, S.W.	9. Ireland, N.	10. Ireland, S.	Means for Grazing, &c. Districts.		
	Rainfall in Inches.														
1	0·94	0·53	0·37	0·46	0·48	0·57	0·48	1·25	0·79	0·88	0·90	1·10	0·98	0·80	0·73
2	1·54	0·88	0·69	0·78	0·77	0·91	0·81	1·91	1·29	1·42	1·38	1·66	1·53	1·31	1·17
3	2·38	1·27	0·93	1·04	1·10	1·31	1·13	2·77	1·74	1·90	1·98	2·23	2·12	1·76	1·63
4	3·33	1·80	1·44	1·48	1·73	1·80	1·65	3·78	2·58	2·78	2·91	3·23	3·06	2·50	2·36
5	4·19	2·33	1·84	1·82	2·29	2·36	2·13	4·88	3·25	3·67	3·65	4·20	3·93	3·18	3·03
6	4·84	2·84	2·30	2·38	2·96	3·14	2·72	6·04	4·01	4·63	4·41	5·42	4·90	4·00	3·81
7	5·49	3·38	2·74	2·99	3·55	3·81	3·29	7·02	4·52	5·43	5·16	6·30	5·69	4·71	4·49
8	6·17	3·76	3·04	3·24	3·88	4·14	3·61	7·74	5·06	5·94	5·69	7·18	6·32	5·23	4·97
9	6·75	4·15	3·45	3·63	4·37	4·63	4·06	8·45	5·69	6·74	6·38	8·03	7·06	5·86	5·56
10	7·58	4·77	4·01	4·05	4·73	5·04	4·52	9·39	6·42	7·29	7·02	8·69	7·76	6·32	6·14
11	8·04	5·19	4·30	4·19	4·84	5·27	4·76	9·85	6·72	7·52	7·34	9·17	8·12	6·60	6·44
12	8·82	5·58	4·61	4·59	5·27	5·66	5·14	10·49	7·24	8·09	7·90	9·68	8·68	7·21	6·91
13	9·41	5·97	4·97	4·86	5·60	6·01	5·48	11·11	7·63	8·74	8·53	10·41	9·28	7·25	7·38
14	9·80	6·27	5·39	5·19	6·08	6·42	5·87	11·68	8·12	9·37	9·09	11·16	9·88	8·30	7·88
15	10·17	6·69	5·86	5·65	6·49	6·86	6·31	12·28	8·57	9·88	9·53	11·64	10·38	8·72	8·35
16	10·63	7·14	6·40	6·20	6·98	7·45	6·83	13·04	9·00	10·44	10·06	12·28	10·96	9·40	8·90
17	11·08	7·56	6·85	6·72	7·48	7·94	7·31	13·69	9·53	11·12	10·62	13·15	11·62	9·89	9·47
18	11·62	7·91	7·24	7·09	7·85	8·29	7·68	14·30	9·97	11·53	11·13	13·59	12·10	10·29	9·89
19	12·16	8·29	7·61	7·46	8·21	8·61	8·04	14·82	10·43	11·96	11·62	14·13	12·59	10·53	10·39
20	12·81	8·82	8·10	8·00	8·95	9·10	8·59	15·65	11·08	12·56	12·54	14·91	13·35	10·91	10·97
21	13·20	9·25	8·55	8·56	9·48	9·63	9·09	16·25	11·62	13·14	13·03	15·52	13·91	11·46	11·50
22	13·72	9·81	9·04	9·02	10·20	10·30	9·67	16·89	12·31	13·79	13·53	16·12	14·53	12·22	12·10
23	14·32	10·35	9·62	9·58	11·03	10·90	10·30	17·64	12·99	14·46	14·32	16·94	15·27	12·75	12·79
24	14·71	10·76	10·04	10·11	11·54	11·29	10·75	18·20	13·53	15·06	15·01	17·60	15·88	13·12	13·32
25	15·11	11·12	10·49	10·63	12·06	11·76	11·21	18·73	14·07	15·54	15·48	18·20	16·40	13·56	13·81
26	15·56	11·65	10·96	11·01	12·70	12·23	11·71	19·54	14·71	16·24	16·33	18·91	17·15	14·11	14·43
27	16·35	12·45	11·40	11·50	13·12	12·67	12·23	20·47	15·43	16·80	17·11	19·65	17·89	14·66	15·06
28	16·90	13·11	12·04	12·17	13·74	13·21	12·85	21·39	16·19	17·58	17·86	20·40	18·68	15·21	15·77
29	17·57	13·95	12·88	12·81	14·53	13·70	13·57	22·27	17·01	18·37	18·75	21·22	19·52	15·77	16·55
30	17·93	14·40	13·67	13·53	15·27	14·36	14·25	22·99	18·03	19·22	19·71	22·13	20·42	16·48	17·34
31	18·60	14·82	14·10	14·15	15·80	14·86	14·75	23·58	18·56	19·69	20·26	22·68	20·95	16·79	17·85
32	19·37	15·47	14·70	14·57	16·38	15·14	15·25	24·64	19·50	20·25	21·05	23·65	21·82	17·27	18·54
33	19·89	16·08	15·22	15·08	17·00	15·65	15·81	25·39	20·20	20·88	21·76	24·46	22·54	17·82	19·18
34	20·37	16·58	15·90	15·75	17·62	16·35	16·44	26·18	20·96	21·56	22·46	25·29	23·29	18·41	19·87
35	21·22	17·36	16·52	16·43	18·49	17·22	17·20	27·13	21·83	22·78	23·45	26·34	24·31	19·23	20·76
36	21·91	17·72	17·01	17·02	19·02	17·82	17·72	28·00	22·47	23·54	24·31	26·95	25·05	19·73	21·39
37	22·65	18·34	17·62	17·61	19·56	18·37	18·30	29·03	23·23	24·26	25·06	27·72	25·86	20·32	22·08
38	23·13	18·80	18·28	18·23	20·18	19·06	18·91	30·07	24·00	25·08	25·81	28·39	26·67	21·14	22·79
39	23·99	19·35	18·82	18·86	20·70	19·56	19·46	31·03	24·77	25·93	26·73	29·10	27·51	21·95	23·49
40	25·00	19·86	19·34	19·31	21·21	20·06	19·96	31·85	25·51	26·63	27·42	29·67	28·22	22·62	24·09
41	25·68	20·51	20·01	20·20	21·97	20·95	20·73	32·81	26·22	27·64	28·25	30·41	29·07	23·59	24·90
42	26·56	20·90	20·58	20·83	22·59	21·54	21·29	33·67	27·00	28·54	29·03	31·27	29·90	24·45	25·60
43	27·63	21·33	21·14	21·56	23·29	22·42	21·96	34·72	27·77	29·83	29·84	32·24	30·88	25·82	26·42
44	28·51	22·01	21·99	22·39	24·34	23·29	22·80	35·94	28·91	31·15	30·86	33·38	32·05	26·80	27·43
45	29·42	22·53	22·63	22·97	24·90	23·96	23·40	37·23	29·72	32·20	31·75	34·24	33·03	27·86	28·22
46	30·41	23·14	23·25	23·73	25·52	24·62	24·05	38·26	30·43	33·10	32·76	35·07	33·92	28·33	28·99
47	31·52	23·91	23·72	24·21	26·02	25·39	24·65	39·48	31·24	34·06	33·56	35·81	34·83	29·66	29·74
48	32·40	24·50	24·31	24·84	26·62	26·05	25·26	40·66	32·13	35·16	34·45	36·73	35·83	30·70	30·55
49	33·54	25·18	24·92	25·39	27·07	26·84	25·88	41·69	32·85	36·10	35·19	37·56	36·68	31·71	31·28
50	34·73	25·63	25·38	25·84	27·59	27·18	26·32	42·86	33·67	37·20	36·07	38·44	37·65	32·65	31·99
51	35·42	26·10	25·84	26·21	28·01	27·69	26·77	43·73	34·25	38·05	36·84	39·19	38·41	33·46	32·59
52	36·46	26·75	26·31	26·75	28·71	28·40	27·38	44·94	35·09	39·17	37·64	40·19	39·41	34·33	33·40

TABLE III.—SHOWING FOR EACH DISTRICT, DURING THE ELEVEN YEARS 1878–88, THE MEAN AGGREGATE VALUES FOR ACCUMULATED HEAT ABOVE 42° F. FROM THE BEGINNING OF THE YEAR TO THE END OF EACH WEEK IN THE YEAR.

Numbers of Weeks.	Principal Wheat-producing Districts.						Principal Grazing, &c. Districts.						Channel Islands.	Means for the British Islands generally.
	0. Scotland, N.	1. Scotland, E.	2. England, N.E.	3. England, E.	4. Midland Counties.	5. England, S.	Means for Wheat-producing Districts.	6. Scotland, W.	7. England, N.W.	8. England, S.W.	9. Ireland, N.	10. Ireland, S.	Means for Grazing &c. Districts.		
	Day Degrees, above 42° Fahrenheit.														
1	6	6	8	11	13	14	10	11	12	19	16	22	16	26	13
2	11	11	11	13	18	19	14	17	16	29	25	36	25	39	20
3	19	21	18	18	25	27	22	27	24	42	38	55	37	57	30
4	22	24	21	23	31	34	27	32	28	55	46	72	47	73	37
5	28	31	28	31	41	45	35	40	37	70	59	92	60	93	48
6	34	39	35	40	50	56	44	50	45	88	71	112	73	113	59
7	39	46	45	52	63	72	56	61	55	108	85	134	89	137	73
8	49	62	61	68	81	89	72	72	67	126	102	154	104	158	88
9	58	76	73	83	99	107	88	85	80	148	121	180	123	181	106
10	66	94	93	107	122	132	110	101	97	172	141	208	144	209	127
11	76	107	108	130	145	154	129	115	113	194	160	230	162	235	146
12	81	118	120	149	164	176	145	129	127	216	178	255	181	257	163
13	90	132	134	171	190	203	166	145	145	241	198	284	203	286	185
14	108	158	159	205	227	241	198	173	175	273	228	318	233	320	216
15	127	185	183	238	261	277	229	203	204	309	263	357	267	359	248
16	151	215	212	275	300	318	264	237	237	348	299	398	304	400	284
17	174	246	243	318	344	364	303	271	274	392	339	443	344	448	324
18	203	289	283	371	398	419	352	314	317	439	385	494	390	502	371
19	233	333	327	428	459	481	406	360	365	498	436	554	443	565	425
20	270	382	379	493	524	554	466	413	424	564	491	618	502	637	484
21	319	446	441	568	600	638	539	481	496	644	559	696	575	720	557
22	366	509	509	654	681	729	611	548	569	728	630	775	650	809	633
23	411	573	581	744	768	825	698	619	647	817	706	861	730	901	714
24	467	654	666	837	865	926	790	703	739	915	793	957	821	1003	806
25	538	745	758	941	970	1038	890	801	841	1022	893	1063	924	1110	907
26	621	853	871	1069	1097	1170	1012	910	957	1141	1001	1180	1038	1231	1025
27	703	960	989	1198	1223	1299	1134	1018	1072	1263	1113	1299	1153	1357	1144
28	785	1066	1105	1324	1343	1428	1253	1121	1183	1378	1216	1410	1262	1481	1258
29	866	1170	1220	1453	1470	1563	1375	1226	1298	1504	1320	1527	1375	1610	1375
30	949	1271	1330	1577	1592	1695	1493	1333	1412	1626	1424	1644	1488	1739	1491
31	1030	1375	1444	1705	1716	1830	1614	1439	1528	1751	1534	1764	1603	1874	1609
32	1114	1481	1558	1833	1841	1968	1736	1546	1644	1876	1644	1882	1718	2010	1727
33	1198	1580	1668	1955	1959	2098	1852	1648	1755	1995	1751	1995	1829	2141	1841
34	1286	1685	1779	2080	2077	2231	1970	1844	1871	2121	1860	2113	1962	2276	1966
35	1360	1776	1883	2195	2186	2355	2079	1847	1975	2235	1957	2220	2047	2404	2063
36	1435	1865	1983	2307	2290	2472	2183	1938	2076	2342	2050	2323	2146	2527	2165
37	1506	1947	2073	2411	2387	2583	2280	2025	2170	2445	2136	2417	2239	2645	2260
38	1567	2020	2155	2508	2479	2689	2370	2103	2259	2548	2215	2505	2326	2763	2348
39	1619	2081	2222	2582	2550	2775	2442	2168	2331	2631	2283	2583	2399	2863	2421
40	1663	2136	2280	2647	2611	2851	2505	2226	2393	2706	2342	2654	2464	2956	2485
41	1704	2183	2329	2701	2662	2913	2558	2276	2446	2771	2390	2710	2519	3037	2539
42	1739	2223	2373	2749	2707	2968	2604	2321	2492	2829	2437	2766	2569	3111	2587
43	1767	2253	2407	2789	2744	3012	2641	2355	2528	2879	2472	2810	2609	3175	2625
44	1788	2278	2437	2824	2776	3054	2674	2385	2561	2926	2504	2850	2645	3236	2660
45	1806	2299	2460	2850	2802	3088	2700	2410	2586	2965	2533	2889	2677	3290	2689
46	1820	2314	2476	2867	2819	3111	2717	2427	2607	2998	2556	2921	2702	3334	2710
47	1829	2325	2489	2885	2835	3134	2734	2442	2622	3025	2572	2946	2721	3375	2728
48	1840	2338	2503	2901	2852	3155	2750	2459	2639	3053	2590	2972	2743	3413	2747
49	1844	2344	2511	2910	2863	3169	2759	2468	2649	3072	2601	2988	2756	3441	2758
50	1850	2349	2518	2918	2872	3184	2768	2476	2659	3091	2611	3005	2768	3467	2768
51	1856	2355	2522	2923	2878	3195	2775	2484	2666	3106	2621	3025	2780	3492	2778
52	1862	2361	2527	2929	2885	3206	2782	2493	2674	3126	2632	3042	2793	3518	2788

TABLE IV.—SHOWING FOR EACH DISTRICT, DURING THE ELEVEN YEARS 1878–88, THE MEAN AGGREGATE VALUES FOR ACCUMULATED HEAT BELOW 42° F., FROM THE BEGINNING OF THE YEAR TO THE END OF EACH WEEK IN THE YEAR.

Numbers of Weeks.	Principal Wheat-producing Districts.						Principal Grazing, &c. Districts.						Channel Islands.	Means for the British Islands generally.
	0. Scotland, N.	1. Scotland, E.	2. England, N.E.	3. England, E.	4. Midland Counties.	5. England, S.	Means for Wheat-producing Districts.	6. Scotland, W.	7. England, N.W.	8. England, S.W.	9. Ireland, N.	10. Ireland, S.	Means for Grazing, &c. Districts.		
	Day-Degrees below 42° Fahrenheit.														
1	33	40	31	33	32	20	31	28	25	11	21	12	19	5	25
2	73	87	78	89	88	68	82	66	66	41	51	38	52	21	67
3	109	129	118	136	133	108	125	98	99	66	79	62	81	34	103
4	145	177	165	185	184	148	172	138	141	95	116	88	116	50	144
5	173	210	200	223	221	178	206	162	169	115	139	104	138	57	172
6	202	244	232	256	250	203	237	185	196	129	161	117	158	64	198
7	237	280	261	286	278	224	266	210	217	144	183	130	177	70	222
8	268	315	292	321	312	252	298	236	244	167	204	149	200	79	249
9	301	349	323	355	344	279	330	262	270	186	224	161	221	88	276
10	338	380	350	382	371	300	357	284	291	203	243	177	240	95	299
11	372	421	387	422	410	333	395	316	323	227	271	198	267	107	331
12	408	457	418	453	441	356	425	341	348	243	294	216	288	113	357
13	440	487	444	482	471	378	452	364	371	261	316	235	309	118	381
14	463	512	464	503	493	392	473	384	389	272	335	249	326	122	400
15	482	528	479	519	509	404	488	396	400	280	345	257	336	123	412
16	497	541	489	530	521	411	498	405	409	286	352	262	343	124	421
17	512	554	499	539	532	417	508	414	415	291	359	267	349	124	429
18	522	563	507	548	542	421	516	420	420	293	364	269	353	124	435
19	532	571	513	554	548	424	522	426	424	295	369	272	357	124	440
20	539	576	515	557	551	425	525	428	425	295	370	272	358	124	442
21	542	577	516	558	552	425	526	428	425	225	371	272	358	124	442
22	545	578	516	558	552	425	526	428	425	295	371	273	358	124	442
23	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
24	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
25	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
26	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
27	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
28	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
29	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
30	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
31	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
32	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
33	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
34	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
35	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
36	546	578	516	558	552	425	526	429	425	295	371	273	359	124	443
37	546	578	516	558	553	425	526	429	425	295	371	273	359	124	443
38	546	579	516	558	553	425	526	429	425	295	371	273	359	124	443
39	548	581	516	559	554	425	527	429	425	295	371	273	359	124	443
40	551	583	519	562	560	428	530	430	427	297	372	274	363	124	445
41	559	591	523	568	568	434	537	436	429	299	374	276	363	124	450
42	563	594	526	573	574	437	541	438	430	300	375	277	364	124	453
43	577	611	536	583	586	444	552	450	437	304	385	284	372	124	462
44	589	624	544	591	596	449	561	456	443	306	390	289	377	124	469
45	605	642	557	607	613	459	576	469	453	309	401	297	386	124	481
46	624	665	576	629	638	477	597	487	468	319	416	309	400	125	499
47	649	694	598	651	663	492	620	508	486	329	435	322	416	126	518
48	674	722	620	676	689	511	644	525	500	338	451	335	430	127	537
49	714	766	660	718	734	545	685	561	531	361	488	362	461	135	573
50	746	808	701	759	776	574	724	592	561	380	519	388	488	142	606
51	783	852	741	802	817	606	764	625	593	399	539	415	514	148	639
52	820	898	779	841	857	637	802	653	624	420	576	439	542	155	672

TABLE V.—SHOWING FOR EACH DISTRICT, DURING THE EIGHT YEARS 1881–88, THE MEAN AGGREGATE NUMBERS OF HOURS OF BRIGHT SUNSHINE FROM THE BEGINNING OF THE YEAR TO THE END OF EACH WEEK IN THE YEAR.

Numbers of Weeks.	Principal Wheat-producing Districts.						Principal Grazing, &c. Districts.						Channel Islands.	Means for the British Islands generally.
	0. Scotland, N.	1. Scotland, E.	2. England, N.E.	3. England, E.	4. Midland Counties.	5. England, S.	Means for Wheat-producing Districts.	6. Scotland, W.	7. England, N.W.	8. England, S.W.	9. Ireland, N.	10. Ireland, S.	Means for Grazing, &c. Districts.		
	Numbers of Hours of Bright Sunshine.														
1	5	10	7	10	9	9	9	6	7	11	10	14	10	15	10
2	12	19	14	20	17	18	18	14	14	21	18	25	18	31	18
3	19	34	21	29	26	26	27	23	22	32	28	37	28	46	28
4	23	47	30	45	37	37	39	30	33	43	39	50	39	64	39
5	33	60	39	60	49	49	51	39	41	58	50	63	50	83	51
6	44	77	52	78	65	63	67	54	56	74	66	80	66	103	67
7	59	94	66	92	78	77	81	68	70	91	82	97	82	123	82
8	77	116	82	108	95	92	99	83	86	111	100	117	99	146	99
9	97	135	101	128	113	113	118	99	106	132	113	134	117	171	118
10	117	156	123	151	135	134	140	120	124	156	130	160	138	196	139
11	142	184	150	182	162	163	168	145	151	192	156	189	167	240	168
12	166	216	176	210	189	192	197	170	174	223	181	220	194	274	196
13	192	238	200	242	214	222	223	199	200	256	209	252	223	312	223
14	230	274	238	287	252	260	262	243	241	298	247	297	265	337	264
15	264	304	262	321	280	291	292	277	270	335	280	335	299	400	296
16	294	331	284	351	307	321	319	307	293	372	312	360	332	440	326
17	329	372	312	387	340	357	354	338	330	413	344	405	366	487	360
18	367	406	349	427	379	400	392	[illegible]	371	456	384	452	408	540	400
19	401	450	391	476	425	449	438	423	415	509	428	497	454	605	446
20	444	496	436	525	468	494	484	466	462	559	470	545	500	664	492
21	489	545	484	576	510	540	531	518	511	605	518	595	549	715	540
22	525	594	525	629	553	589	578	561	557	653	562	638	594	771	586
23	565	634	559	679	592	633	619	600	599	699	593	674	633	819	626
24	609	674	599	728	638	684	665	646	647	760	635	723	682	884	674
25	649	719	635	765	675	724	704	694	687	810	681	771	729	940	717
26	686	768	674	819	722	776	752	735	731	860	710	809	769	997	761
27	720	801	717	874	770	829	798	773	772	911	738	844	803	1054	803
28	753	843	759	920	812	875	842	814	815	959	770	882	848	1113	845
29	783	882	797	965	848	915	881	853	852	998	801	914	884	1156	883
30	815	918	831	1009	884	958	920	888	885	1044	830	952	920	1209	920
31	839	958	866	1046	923	1000	959	929	927	1092	862	988	960	1275	960
32	862	992	903	1088	963	1046	998	966	963	1137	890	1023	996	1335	997
33	891	1025	936	1130	1004	1090	1037	1001	1000	1182	921	1060	1033	1390	1035
34	920	1060	965	1168	1042	1130	1073	1033	1035	1231	951	1097	1069	1443	1071
35	946	1090	986	1198	1067	1160	1100	1057	1055	1261	970	1122	1093	1477	1097
36	976	1124	1014	1229	1096	1193	1131	1090	1085	1298	994	1156	1125	1514	1128
37	1001	1149	1042	1265	1129	1228	1163	1122	1118	1336	1024	1190	1158	1561	1161
38	1023	1173	1063	1297	1156	1261	1190	1145	1147	1371	1048	1221	1186	1608	1188
39	1046	1199	1086	1327	1183	1290	1217	1172	1173	1399	1070	1247	1212	1642	1215
40	1068	1223	1110	1351	1204	1313	1240	1194	1195	1427	1090	1270	1235	1668	1238
41	1088	1242	1133	1374	1228	1340	1263	1215	1215	1453	1109	1296	1258	1700	1261
42	1103	1259	1150	1396	1250	1363	1284	1230	1230	1476	1125	1314	1275	1731	1280
43	1123	1279	1165	1418	1267	1381	1302	1247	1245	1493	1144	1332	1292	1753	1297
44	1135	1291	1174	1432	1280	1395	1314	1260	1257	1508	1160	1351	1307	1771	1311
45	1149	1306	1186	1449	1292	1408	1328	1271	1268	1522	1174	1366	1320	1787	1324
46	1157	1315	1195	1463	1304	1421	1340	1281	1278	1537	1189	1382	1333	1808	1337
47	1165	1328	1209	1477	1318	1433	1353	1293	1290	1550	1202	1397	1346	1821	1350
48	1172	1335	1218	1487	1327	1442	1362	1299	1295	1562	1210	1406	1354	1836	1358
49	1181	1347	1229	1497	1338	1452	1373	1310	1304	1576	1222	1418	1366	1849	1370
50	1184	1356	1238	1509	1346	1463	1382	1317	1310	1588	1230	1431	1375	1862	1379
51	1188	1362	1246	1518	1355	1470	1390	1323	1317	1597	1236	1441	1383	1873	1387
52	1192	1371	1252	1524	1361	1479	1397	1329	1322	1607	1243	1451	1390	1884	1394

TABLE VI.—SHOWING FOR EACH DISTRICT, DURING THE EIGHT YEARS 1881–88, THE MEAN PERCENTAGES OF THE POSSIBLE AMOUNT OF BRIGHT SUNSHINE FROM THE BEGINNING OF THE YEAR TO THE END OF EACH WEEK IN THE YEAR.

Numbers of Weeks.	Principal Wheat-producing Districts.						Principal Grazing, &c. Districts.						Channel Islands.	Means for the British Islands generally.
	0. Scotland, N.	1. Scotland, E.	2. England, N.E.	3. England, E.	4. Midland Counties.	5. England, S.	Means for Wheat-producing Districts.	6. Scotland, W.	7. England, N.W.	8. England, S.W.	9. Ireland, N.	10. Ireland, S.	Means for Grazing, &c. Districts.		
	Percentages of Possible Duration.														
1	11	21	13	19	17	17	17	12	13	20	19	25	18	25	18
2	13	20	13	18	16	16	17	14	13	19	17	23	17	26	17
3	13	23	13	17	16	15	17	15	14	19	17	22	17	26	17
4	12	23	14	20	16	16	18	14	15	18	18	22	17	27	18
5	13	23	14	21	17	17	18	14	15	20	18	22	18	27	18
6	14	24	15	22	18	18	19	16	17	21	19	23	19	28	19
7	16	24	16	22	19	18	20	17	17	21	20	23	20	28	20
8	17	25	17	22	19	19	20	18	18	22	21	24	21	28	21
9	19	26	18	23	20	20	21	18	19	23	20	24	21	29	21
10	20	26	19	23	21	20	22	19	20	24	21	25	22	29	22
11	21	27	21	25	22	22	23	21	21	26	22	26	23	32	23
12	22	28	22	26	23	23	24	22	22	27	23	27	24	33	24
13	23	28	23	27	24	25	25	23	23	27	24	28	25	34	25
14	25	29	25	29	25	26	27	25	25	30	25	30	27	35	27
15	25	29	24	30	26	27	27	26	25	31	26	31	28	36	28
16	26	29	24	30	26	27	27	26	25	31	27	31	28	37	28
17	27	30	25	30	26	28	28	27	26	32	27	32	29	37	29
18	27	30	25	31	27	29	28	28	27	33	28	33	30	38	29
19	27	30	26	32	28	30	29	28	28	34	29	33	30	40	30
20	28	31	27	33	29	31	30	29	29	35	29	34	31	41	31
21	29	32	28	33	30	32	31	30	30	35	30	35	32	41	32
22	29	33	29	34	30	32	32	31	30	36	31	35	33	42	33
23	29	33	29	35	31	32	32	31	31	36	30	35	33	42	33
24	29	33	29	35	31	33	32	31	31	37	31	35	33	43	33
25	30	33	29	35	31	33	32	32	32	37	31	36	34	43	33
26	30	33	29	36	32	34	33	32	32	38	31	35	34	44	34
27	29	33	30	36	32	35	33	32	32	38	31	35	34	44	34
28	29	33	30	37	32	35	33	32	32	38	30	35	33	45	33
29	29	33	30	37	32	35	33	32	32	38	30	35	33	44	33
30	29	33	30	37	32	35	33	32	32	38	30	35	33	45	33
31	29	33	30	37	32	35	33	32	32	39	30	35	34	45	34
32	29	33	31	37	33	36	34	32	32	39	30	35	34	46	34
33	28	33	30	37	33	36	34	33	32	39	30	35	34	46	34
34	29	33	31	37	33	36	34	33	33	39	30	35	34	46	34
35	28	33	30	37	33	36	34	32	32	39	30	35	34	46	34
36	29	33	30	37	33	36	34	32	32	39	30	35	34	46	34
37	29	33	30	37	33	36	34	32	32	39	30	35	34	46	34
38	29	33	30	37	33	34	34	33	32	39	30	35	34	46	34
39	29	33	30	37	33	36	34	33	32	39	30	35	34	46	34
40	29	33	30	37	33	36	34	32	32	39	30	35	34	46	34
41	28	33	30	37	33	36	34	32	32	39	30	35	34	46	34
42	28	32	30	37	33	36	34	32	32	39	29	34	33	46	34
43	28	32	30	37	32	36	34	32	32	39	29	34	33	46	34
44	28	32	30	36	32	35	33	32	32	38	29	34	33	45	33
45	28	32	29	36	32	35	33	31	32	38	29	34	33	45	33
46	28	32	29	36	32	35	33	31	31	38	29	34	33	45	33
47	28	32	29	36	32	35	33	31	31	38	29	34	33	44	33
48	28	32	29	36	32	34	33	31	31	37	29	34	32	44	33
49	28	32	29	35	32	34	32	31	31	37	29	33	32	44	32
50	28	31	29	35	32	34	32	31	31	37	29	33	32	43	32
51	27	31	29	35	31	34	32	30	30	37	28	33	32	43	32
52	27	31	28	35	31	34	32	30	30	37	28	33	32	43	32

WEEKLY WEATHER REPORT, 1888.

VOL. V. APPENDIX IV.]
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TABLE I.—SHOWING IN DEGREES FAHRENHEIT FOR EACH DISTRICT, AND FOR THE ELEVEN YEARS 1878–88, THE MEAN TEMPERATURE OF THE AIR FOR EACH WEEK IN THE YEAR.

NUMBERS OF WEEKS.	Principal Wheat-producing Districts.						Principal Grazing, &c. Districts.						CHANNEL ISLANDS.	MEANS FOR THE BRITISH ISLANDS GENERALLY.
	0. SCOTLAND, N.	1. SCOTLAND, E.	2. ENGLAND, N.E.	3. ENGLAND, E.	4. MIDLAND COUNTIES.	5. ENGLAND, S.	MEANS FOR WHEAT-PRODUCING DISTRICTS.	6. SCOTLAND, W.	7. ENGLAND, N.W.	8. ENGLAND, S.W.	9. IRELAND, N.	10. IRELAND, S.	MEANS FOR GRAZING, &C. DISTRICTS.		
	MEAN WEEKLY VALUES.														
1	38·6	37·5	39·0	38·9	39·1	40·7	39·0	39·3	40·0	43·1	41·0	43·3	41·3	45·3	40·2
2	37·3	36·0	35·9	34·5	34·5	36·0	35·4	37·7	37·0	39·3	39·2	40·9	38·8	41·8	37·1
3	38·4	37·6	37·6	36·2	36·7	37·6	37·1	38·9	38·5	40·5	39·8	41·4	39·8	42·7	38·5
4	37·5	35·9	35·8	35·8	35·9	37·3	36·1	37·2	36·9	39·7	38·3	40·5	38·5	42·0	37·3
5	38·8	38·5	38·1	38·0	38·3	39·5	38·5	39·9	39·3	41·6	40·6	42·4	40·8	43·9	39·7
6	38·8	38·5	38·5	38·9	39·4	40·3	39·1	39·8	39·6	42·3	40·8	42·9	41·1	43·8	40·1
7	38·3	38·6	39·4	39·5	40·1	41·1	39·7	40·0	40·3	42·6	41·1	42·9	41·4	44·9	40·6
8	38·9	39·1	39·6	39·1	39·2	40·2	39·4	40·2	40·1	41·4	41·5	42·4	41·1	43·7	40·3
9	38·7	38·7	39·3	39·0	39·6	40·4	39·4	39·9	40·0	42·1	41·6	43·7	41·5	44·1	40·5
10	38·0	39·4	40·5	41·2	41·3	42·1	40·9	40·8	41·1	42·8	42·0	43·7	42·1	45·0	41·5
11	38·4	38·3	38·9	39·3	39·4	40·6	39·3	39·5	39·7	41·4	40·5	42·4	40·7	43·8	40·0
12	37·8	38·6	39·4	40·0	40·1	41·5	39·9	40·0	40·3	42·6	41·0	42·8	41·3	44·4	40·6
13	38·7	39·7	40·3	41·1	41·4	42·5	41·0	40·9	41·3	43·2	41·6	43·2	42·0	45·4	41·5
14	41·2	42·0	42·4	43·6	43·9	44·7	43·3	42·9	43·4	44·7	43·3	44·5	43·8	46·3	43·6
15	42·0	43·0	43·0	44·0	44·4	45·3	43·9	44·3	44·5	45·6	45·0	46·0	45·1	47·2	44·5
16	42·9	44·0	44·4	45·4	45·4	46·5	45·1	45·2	45·3	46·2	45·8	46·8	45·9	47·7	45·5
17	42·9	44·3	44·8	46·4	46·6	47·7	46·0	45·2	46·0	47·4	46·3	47·3	46·4	48·8	46·2
18	44·3	46·1	46·2	47·7	47·7	48·9	47·3	46·9	47·1	48·2	47·6	48·9	47·7	49·7	47·5
19	44·3	46·9	47·2	48·8	49·2	50·1	48·4	47·6	48·2	50·0	48·3	49·9	48·8	51·0	48·6
20	45·8	47·9	48·9	50·6	50·7	52·2	50·1	49·1	50·1	51·4	49·4	51·1	50·2	52·3	50·2
21	48·3	50·7	50·7	52·7	52·7	54·0	52·2	51·7	52·3	53·3	51·6	53·1	52·4	53·8	52·3
22	47·6	50·8	51·7	54·2	53·6	55·1	53·1	51·5	52·4	54·0	52·2	53·3	52·7	54·8	52·9
23	46·4	51·1	52·3	54·7	54·4	55·6	53·6	52·1	53·2	54·7	52·8	54·2	53·4	55·1	53·5
24	49·9	53·5	54·3	55·3	55·8	56·5	55·1	54·0	55·1	56·0	54·4	55·7	55·0	56·5	55·1
25	52·1	55·1	55·0	56·8	57·0	57·9	56·4	56·0	56·6	57·3	56·2	57·2	56·7	57·3	56·6
26	54·1	57·5	58·0	60·3	60·1	60·9	59·4	57·6	58·5	59·0	57·5	58·7	58·3	59·3	58·9
27	53·6	57·3	59·0	60·4	60·1	60·5	59·5	57·4	58·4	59·3	58·0	58·9	58·4	59·9	59·0
28	53·7	57·1	58·5	60·0	59·1	60·4	59·0	56·7	57·7	58·5	56·6	57·8	57·5	59·6	58·3
29	53·5	56·9	58·4	60·3	60·1	61·3	59·4	57·0	58·0	59·9	56·9	58·8	58·1	60·3	58·8
30	53·8	56·5	57·7	59·8	59·4	60·8	58·8	57·3	58·2	59·5	56·9	58·7	58·1	60·6	58·5
31	53·6	56·8	58·2	60·2	59·8	61·4	59·3	57·2	58·6	59·9	57·7	59·2	58·5	61·1	58·9
32	54·1	57·2	58·2	60·4	59·7	61·7	59·4	57·3	58·5	59·8	57·6	58·9	58·4	61·5	58·9
33	53·7	56·1	57·8	59·4	58·9	60·6	58·6	56·5	57·9	59·1	57·3	58·2	57·8	60·8	58·2
34	54·5	57·1	57·8	59·8	59·0	61·0	58·9	57·0	58·6	59·9	57·6	58·8	58·4	61·2	58·7
35	52·5	54·9	56·8	58·4	57·6	59·7	57·5	55·3	56·7	58·2	55·8	57·3	56·7	60·3	57·1
36	52·7	54·7	56·2	58·0	56·8	58·7	56·9	55·0	56·5	57·3	55·2	56·7	56·1	59·6	56·5
37	52·2	53·8	54·9	56·8	55·7	57·9	55·8	54·2	55·4	56·8	54·3	55·4	55·2	58·9	55·5
38	50·7	52·3	53·6	55·8	55·1	57·1	54·8	53·0	54·7	56·7	53·2	54·6	54·4	58·8	54·6
39	49·0	50·3	51·7	52·4	51·9	54·1	52·1	51·3	52·2	53·8	51·6	53·1	52·4	56·3	52·3
40	47·8	49·4	50·0	50·7	50·0	52·3	50·5	49·9	50·7	52·5	50·4	51·9	51·1	55·2	50·8
41	46·5	47·5	48·2	49·0	47·9	50·0	48·5	48·2	49·0	50·6	48·2	49·6	49·1	53·6	48·8
42	46·2	47·0	47·6	47·7	47·1	49·1	47·7	48·1	48·4	50·2	48·5	49·9	49·0	52·7	48·4
43	43·7	43·7	45·3	46·0	45·3	47·4	45·5	45·0	46·2	48·4	45·5	46·9	46·4	51·1	46·0
44	45·2	43·5	45·0	45·7	44·9	47·1	45·2	45·1	45·8	48·2	45·7	47·0	46·4	50·6	45·8
45	42·3	42·5	43·4	43·5	43·3	45·3	43·6	43·9	44·5	46·8	44·6	46·1	45·2	49·9	44·4
46	41·4	40·8	41·7	41·6	41·3	43·0	41·7	42·0	42·7	45·1	43·1	45·0	43·6	48·0	42·7
47	39·7	39·3	40·8	41·3	40·4	42·9	40·9	41·1	41·9	44·4	41·8	43·5	42·5	47·8	41·7
48	40·1	39·8	40·7	40·4	40·6	42·3	40·8	41·8	42·2	44·7	42·3	43·9	43·0	47·1	41·9
49	36·9	36·7	37·3	37·3	37·1	39·3	37·5	38·3	39·2	41·7	38·4	40·6	39·6	45·1	38·6
50	38·5	36·8	37·2	37·6	37·5	40·0	37·8	38·8	39·2	42·0	39·3	40·9	40·0	44·8	38·9
51	37·8	36·6	37·0	36·8	37·1	38·9	37·3	38·5	38·6	41·5	39·3	40·6	39·7	44·7	38·5
52	37·9	36·8	37·4	37·4	37·4	39·5	37·7	39·1	38·9	42·0	39·6	41·3	40·2	44·7	39·0

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